



CORNELL
UNIVERSITY
LIBRARY



TRANSFERRED TO

MAIN LIBRARY

Cornell University Library
DF 77.W57 1916

Companion to Greek studies.



3 1924 026 954 804



Cornell University Library

The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

A COMPANION
TO
GREEK STUDIES

CAMBRIDGE UNIVERSITY PRESS

C. F. CLAY, MANAGER

London: FETTER LANE, E.C.

Edinburgh: 100 PRINCES STREET



New York: G. P. PUTNAM'S SONS

Bombay, Calcutta and Madras: MACMILLAN AND CO., LTD.

Toronto: J. M. DENT AND SONS, LTD.

Tokyo: THE MARUZEN-KABUSHIKI-KAISHA

All rights reserved

A COMPANION
TO
GREEK STUDIES

EDITED
FOR THE SYNDICS OF THE UNIVERSITY PRESS

BY
LEONARD WHIBLEY, M.A.
Fellow of Pembroke College

THIRD EDITION, REVISED AND ENLARGED

CAMBRIDGE
AT THE UNIVERSITY PRESS
1916

First Edition, 1905
Second Edition, 1906
Third Edition (revised and enlarged), 1916

Cambridge:
PRINTED BY JOHN CLAY, M.A.
AT THE UNIVERSITY PRESS

PREFACE TO THE FIRST EDITION.

THE *Companion to Greek Studies* was undertaken by the Syndics of the University Press with the intention of presenting in one volume such information (apart from that contained in Histories and Grammars) as would be most useful to the student of Greek literature. It differs in scope from other books of the same class; for besides a survey of Greek life, thought, and art in their different branches, it includes a chapter on the physical conditions of Greece, another containing Chronological Tables of politics, literature, and art, and a chapter on certain branches of criticism and interpretation. While each article has been entrusted to a writer who has made a special study of the subject, it has been the aim of the work to give the substance of our knowledge in a concise form. On this account the discussion of controverted points and technical details has been for the most part omitted. For the same reason sources and authorities have not usually been cited in the text, unless the reference has been necessary to establish an argument, to justify an important theory, or to remind the student of the *locus classicus* of the subject. It is hoped that the full table of contents and the indexes of proper names and Greek words will increase the value of the book for purposes of reference. Bibliographies have generally been appended to each article to help those who seek further information. Plans, views, and reproductions of ancient works of art have been carefully chosen and inserted in those articles in which illustration seems most necessary.

The principle which has been followed in the transliteration of Greek words coincides in the main with that adopted by the Society for the Promotion of Hellenic Studies. Names are presented in their familiar English or Latin form; but the diphthong *ei* is usually retained (*e.g.* Peisistratus, Cleisthenes), except in words which are as well established in English as Chaeronea and Alexandria. Greek words other than proper names, unless they are familiar in other forms in English, have usually been transliterated letter for letter (*e.g.* Plethron, Nike, Pentekostys).

While the book has been passing through the press, members of the Syndicate and other scholars have contributed much help in suggestion, in criticism, and in reading the proofs. Thanks are due to the following authors and publishers for granting the use of blocks or for permitting the reproduction of illustrations contained in works written or published by them; to Dr Arthur Evans, to Mr Cecil Torr for blocks from his book on Greek ships, to the Council of the Society for the Promotion of Hellenic Studies, to Messrs Longman and Co., to Messrs Macmillan and Co., to Mr John Murray, to the *Times*, and to Carl Gerold's Sohn Verlag.

L. W.

December, 1904.

PREFACE TO THE SECOND EDITION.

A second edition having been called for within a year of publication, it has not been thought advisable to make changes of substance, but due note has been taken of criticisms, and corrections of detail have been made.

L. W.

March, 1906.

PREFACE TO THE THIRD EDITION.

THE time that has passed since the book was first published allows and requires a fuller revision and more substantial additions than were possible when the second edition was produced. Some subjects are now discussed for the first time, such as Ethnology, Bronzes and Jewellery. Others, Fauna, Flora, Prehistoric Art, Terracottas, Finance and Palaeography, are treated by fresh writers. Professor Bosanquet has revised the article on Sculpture, which was undertaken in the earlier editions by Sir Charles Waldstein: the sections dealing with Archaic, Hellenistic and Graeco-Roman Sculpture have been rewritten: minor changes have been made in the sections dealing with the sculpture of the fifth and fourth centuries B.C. Mr Adcock has contributed a sketch of the development of early constitutions and has revised Mr Wyse's article on Law. Mr Wace has discussed the Prehistoric House. Sir John Sandys has kindly undertaken the revision of the contributions of the late Sir Richard Jebb and Professor A. S. Wilkins, and has made small additions or corrections in the articles on Literature, Education and Textual Criticism. Mr Gaselee has supplied a bibliography for the article on Metre.

There is scarcely an article that has not been revised. While it was not desired unduly to increase the size of the book, additions amounting to over 100 pages have been made and the number of illustrations has been increased by over fifty. The most

considerable additions are connected with the fresh knowledge of the prehistoric age, which has supplied material for a discussion of the difficult problem of Ethnology and has made possible a fuller treatment of Prehistoric Art. Sir Arthur Evans, to whose excavations so much of our knowledge is due, has given generous help in reading Mr Wace's articles on Ethnology, Prehistoric Art and the Prehistoric House, and has made valuable suggestions. He also communicated his most recent conclusions as to the dates of Minoan civilization for the tables on pp. 80-81, which were compiled by the Editor.

To Sir Arthur Evans a further acknowledgment is due for permission to use illustrations of his finds, many of which have been reproduced from the Eleventh Edition of the *Encyclopaedia Britannica*. Acknowledgments are also made for the loan of blocks or the permission to reproduce illustrations or plans to the Director of the British Museum, the Council of the Hellenic Society, the Committee of the British School at Athens, Dr Wiegand, Mr Wace, Mr Ellis H. Minns and Mr Fisher Unwin.

L. W.

December, 1915.

CONTENTS.

CHAPTER I.

GEOGRAPHY, ETHNOLOGY, FAUNA, FLORA.

I. 1. GEOGRAPHY. By H. F. TOZER, M.A., F.R.G.S., Honorary Fellow of Exeter College, Oxford.

SECTION	PAGE
1 Position of Greece	1
2 General characteristics	2
3 Northern Greece	3
4 Macedonia	4
5 Chalcidice	5
6 Thessaly	5
7 Illyricum and Epeirus	7
8 Central Greece	8
9 Acarnania and Aetolia	8
10 Malis, Doris and the Locrians	8
11 Phocis, Delphi	9
12 Boeotia	10
13 Euboea	11
14 Attica and Megaris	11
15 Athens	13
16 Peiraeus	13
17 The Peloponnese	14
18 The Isthmus of Corinth	14
19 Achaia	15
20 Elis	15
21 Messenia	16
22 Laconia	17
23 Arcadia	17
24 Argolis	18
25 The Western Islands	19
26 The Eastern Islands	19
27 The Greek Colonies	20
28 The Propontis, the Euxine, Cyprus, Egypt	20
29 Sicily	21
30 Italy	22

I. 2. ETHNOLOGY. By A. J. B. WACE, M.A., Director of the British School at Athens (formerly Fellow of Pembroke College).

31 Difficulty of problem	23
32 Areas of Greek civilization	23
33 Minoan and Mycenaean civilization	23
34 Sergi's theory	24
35 Ridgeway's theory	26
36 Homeric evidence	27
37 The Pelasgians	27
38 The Achaeans	2ç
39 Invasions of northern peoples	3C
40 Conclusion	32

I. 3. FAUNA. By D'ARCY W. THOMPSON, C.B., Litt.D., Trinity College, Professor of Natural History, University College, Dundee.

SECTION	A. MAMMALS.	PAGE
41	General character	34
42	Apes, Bats	35
43	Insectivora	35
44	Rodents	35
45	Elephant	36
46	Ungulata	36
47	Carnivora	36
48	Seals	38
49	Cetacea	38
	B. BIRDS.	
50	Raptores	38
51	Owls	38
52	Passeres	39
53	Woodpeckers and Parrots	40
54	Kingfishers	41
55	Hoopoe	41
56	Cuckoo, etc.	41
57	Pigeons	41
58	Fowls and Game-birds	42
59	Crane, Stork and Heron	43
60	Waders, etc.	43
61	Swans and Ducks	43
62	Gulls and Terns	44
63	Cormorants and Grebes	44
64	Ostrich	44
	C. REPTILES AND BATRACHIA.	
65	Reptiles	44
66	Tortoises	44
67	Crocodiles and Lizards	45
68	Serpents	45
69	Frogs and Toads	45
	D. FISHES.	
70	Fishes	46
71	Sea-fishes	46
72	Sharks	47
73	Fresh-water fishes	47
74	Fishing	48
	E. INSECTS.	
75	Bees and Wasps	48
76	Butterflies	49
77	Beetles	49
78	Cicadas	49
79	Grasshoppers, Flies, etc.	49
80	Spiders	49

F. MARINE INVERTEBRATES.

SECTION	PAGE
81 Crustacea	50
82 Cuttle-fishes	50
83 Gastropoda	50
84 Lamellibranchiata	51
85 <i>Týθvov</i> , etc.	51

I. 4. FLORA. By Sir WILLIAM TURNER THISELTON-DYER, K.C.M.G., C.I.E., F.R.S., Honorary Student of Christ Church, Oxford, Hon. Sc.D., Cambridge, late Director of the Royal Botanic Gardens, Kew.

86 Introductory	52
87 Trees	53
88 Conifera	54
89 Shrubs	55
90 Coronary Plants	56
91 Cereals	58
92 Pulses	60
93 Fodder Plants	61
94 Fruits	61
95 Nuts	62
96 Pot Herbs	63
97 Mushrooms	64
98 Condiments	64
99 Gardening	65
100 Drugs	65
101 Poisons	66
102 Tanning and Dyeing	66
103 Textiles and Rope-materials	66
104 Reeds, etc.	67
105 Imports	67

CHAPTER II.

HISTORY.

II. I. CHRONOLOGY. By R. D. HICKS, M.A., Fellow of Trinity College.

106 The conventional chronology	69
107 Methods of dating	70
108 Pedigrees	72
109 The Marmor Parium, etc.	76
110 Herodotus' account	77
111 Critical estimate	78
112 Divisions of Greek stock	79
113 Common names for the Greeks	79
114 Settlement	79
115 Mycenaean age	80
116 Migrations	82
117 Expansion of Greece	82

II. 2. CHRONOLOGICAL TABLES.

SECTION		PAGE
118	A. THE EIGHTH AND SEVENTH CENTURIES B.C.	83
119	B. THE SIXTH CENTURY B.C.	86
	C. THE FIFTH CENTURY B.C.	
120	The Persian wars, 500—479	90
121	The Pentecontaety, 478—431	92
122	The Peloponnesian war, 431—404	97
	D. THE FOURTH CENTURY B.C. TO THE BATTLE OF CHAERONEA.	
123	Supremacy of Sparta, 404—371	101
124	The greatness of Thebes and the rise of Macedon, 370—338.	104
	E. THE FOURTH AND THIRD CENTURIES B.C.	
125	Fall of the Persian empire: foundation of the Hellenistic kingdoms, 338—280	108
	F. THE THIRD AND SECOND CENTURIES B.C.	
126	Federal Greece to the battle of Sellasia: 280—220	112
127	The Roman domination: 220—146	114

CHAPTER III.

LITERATURE, PHILOSOPHY, SCIENCE.

III. I. LITERATURE. By the late Sir RICHARD C. JEBB, Litt.D., O.M., Regius Professor of Greek.

A. EPIC POETRY.		
128	Primitive Greek poetry	117
129	The Epic	118
130	The Iliad and the Odyssey	118
131	Character of Homeric poetry	119
132	Influence of the Homeric poems.	120
133	Works ascribed to Homer	120
134	Notices of Homer's life. Homeridae	121
135	Greek interpreters of Homer	121
136	Alexandrian criticism. Zenodotus. Aristophanes. Aristarchus. The division into books	121
137	The Pergamene School	123
138	Ancient commentaries	123
139	The Chorizontes	123
140	The 'Homeric question'	124
141	F. A. Wolf. Developments of Wolf's theory	124
142	Other theories	125
143	General results.—Iliad. Odyssey. Present position of the question.	125
144	The Epic Cycle	126
145	Hesiod. Stamp of Hesiodic poetry	127
146	The Homeric Hymns	128
147	The later Epos	129

B. ELEGIAC, IAMBIC, AND LYRIC POETRY.		PAGE
SECTION		
148	Elegiac poetry. Its range and duration	130
149	Iambic poetry	131
150	Lyric poetry. The Aeolian lyric	131
151	The Dorian choral lyric	132
152	Pindar	133
153	Bacchylides	135
154	Timotheus	135
C. DRAMA.		
155	Origin of Tragedy. Aeschylus	135
156	Trilogy and Tetralogy	136
157	Plays of Aeschylus	137
158	Sophocles	138
159	Euripides	141
160	Decadence of Tragedy	144
161	Origin of Attic Comedy	144
162	Poets of the Old Comedy	145
163	Aristophanes	146
164	Comedy after Aristophanes	147
D. HISTORICAL PROSE.		
165	The early prose	148
166	Herodotus	149
167	Thucydides	151
168	Xenophon	153
169	Treatises on the Polity of Athens	156
170	Literary compilers of history	156
E. RHETORIC AND ORATORY.		
171	The early Rhetoric	157
172	Antiphon	157
173	Andocides	158
174	Lysias	158
175	Isocrates	159
176	Isaëus	161
177	Demosthenes	161
178	Aeschines	164
179	Lycurgus	164
180	Hypereides	165
181	Deinarchus	165
182	'Asianism' versus 'Atticism'	165
183	F. PHILOSOPHICAL PROSE	166
184	Plato	166
185	Aristotle. <i>Rhetorica. Poetica</i>	166
G. LITERATURE OF THE ALEXANDRIAN AND ROMAN AGE.—POETRY.		
186	Character of the 'classical' period; and of the Alexandrian. Value of the later Greek literature	168
187	Relation of the Alexandrian to the Roman period	169
188	Poetry of the third and second centuries B.C.—Callimachus	169
189	Apollonius Rhodius	170

SECTION	PAGE
190 Theocritus	170
191 Bion and Moschus	171
192 Lycophron. Timon	171
193 Didactic and learned poetry	171
194 The later heroic or mythic epos	172
195 Minor forms of poetry	172
196 Continuity of elegiac poetry	173
197 The 'epigram.' Anthologies	173
198 Summary	174

H. PROSE OF THE ALEXANDRIAN AND ROMAN AGE.

199 Prose Literature	174
200 Science and Learning	174
201 Criticism and exegesis	174
202 The Alexandrian <i>κανόνες</i>	175
203 Mythology	175
204 Grammar	175
205 Lexicography. Metre	176
206 Geography	176
207 Strabo	177
208 Pausanias	177
209 History. Polybius	178
210 Compilers of Roman History	179
211 Diodorus Siculus	179
212 Dionysius of Halicarnassus	179
213 Appian	179
214 Dion Cassius	180
215 Herodian	180
216 Josephus	181
217 Arrian	181
218 Biography. Plutarch	181
219 Diogenes Laertius	182
220 The Philostrati	183
221 Rhetoric after Aristotle	183
222 The New Sophistic	184
223 Dion Chrysostomus. Aristeides	184
224 The fourth-century sophists. Libanius. Themistius. Himerius. Julian	184
225 Lucian	185
226 Letters	186
227 Miscellanies. Athenaeus	186
228 Aelian. Polyaeus	186
229 Stobaeus	186
230 Medicine and Philosophy. Galen	187
231 Sextus Empiricus	187
232 Marcus Aurelius	187
233 The Greek romance-writers. Literary pedigree of the Greek novel	188
234 The first recorded novelists	188
235 Xenophon of Ephesus. Longus. Heliodorus. Achilles Tattius. Chariton	188
236 Conclusion	189

III. 2. PHILOSOPHY (SCHOOLS TO ARISTOTLE) by HENRY JACKSON,
Litt.D., F.B.A., O.M., Regius Professor of Greek, and (LATER
SCHOOLS) R. D. HICKS, M.A.

A. PRESOCRATICS.

SECTION	PAGE
237 The Ionians. Ionian monism	191
238 The Eleatics	192
239 The Physicists	193
240 Philosophy superseded by Humanism. Sophistry	195

B. SOCRATES AND THE MINOR SOCRATICS.

241 Socrates: life and personality	196
242 Theory of education. Dialectic. Definitions. Ethics	197
243 Socratic Schools. The Cynics. The Cyrenaics. The Megarians. The Eleo-Eretrians	198

C. PLATO AND THE OLD ACADEMY.

244 Plato's life. Writings	200
245 Principal dialogues	200
246 Order of the dialogues	201
247 Theory of ideas	202
248 Its phases	202
249 Modern orthodoxy	203
250 Modern heresy	204
251 The idealist cosmology	204
252 Natural kinds	206
253 Ethics	206
254 The Old Academy	206

D. ARISTOTLE AND PERIPATETICISM.

255 Aristotle's life. Writings	207
256 Relation to Plato. Material and formal causes	208
257 Moving and final causes	208
258 Psychology	209
259 First existence	209
260 Sciences. Logic. Natural sciences	210
261 Ethical treatises	211
262 Ethics	211
263 The <i>Nicomachean Ethics</i>	212
264 The <i>politics</i>	212
265 Academicism and Peripateticism	214
266 The Peripatetics	215

E. LATER SCHOOLS: EPICUREANS, STOICS, SCEPTICS.

267 Characteristics of the Later Schools	215
268 Epicurus. Life and writings	216
269 General aspects. Canonic	216
270 Physics	217
271 Ethics. Stoics. Relation to predecessors	218

SECTION	PAGE
272 Logic	220
273 Physics	220
274 Psychology	221
275 Ethics	223
276 Sceptics	225
277 Eclectics. Epictetus—M. Antoninus	226

III. 3. SCIENCE. By JAMES GOW, Litt.D., Headmaster of Westminster School (formerly Fellow of Trinity College).

278 Practical arithmetic (<i>λογιστική</i>)	228
A. THE HELLENIC PERIOD.	
279 Theory of Numbers (<i>ἀριθμητική</i>)	229
280 Geometry	230
281 Other sciences	232
282 B. THE ALEXANDRIAN PERIOD	233

CHAPTER IV.

ART.

IV. 1. PREHISTORIC ART. By A. J. B. WACE, M.A.

283 Excavations	236
284 Crete. Neolithic Age	236
285 Crete. Early Minoan	237
286 Crete. Middle Minoan	238
287 Crete. Late Minoan I, II	240
288 Crete. Late Minoan III	244
289 Cyclades. Early Period	245
290 Cyclades. Middle Period	247
291 Cyclades. Late Period	247
292 South-Eastern Greece	248
293 First and Second Phases	249
294 Last Phase	252
295 North-Eastern Greece	254
296 North-Western Greece	256
297 Trojan area	256
298 Architecture. Temples and Shrines	257
299 Fortifications	258
300 Beehive tombs	259

IV. 2. ARCHITECTURE. By the late F. C. PENROSE, Litt.D., Honorary Fellow of Magdalene College, and E. A. GARDNER, Litt.D., Yates Professor of Archaeology in University College, London (formerly Fellow of Gonville and Caius College).

301 Survival of the wooden type	261
302 Development of Doric order	261
303 Refinements in the Dorian order.	262
304 Parallel development of the Ionic	263
305 Derivation of the Corinthian order	263

SECTION	PAGE
306 Architectural members of Doric and Ionic buildings	265
307 Classification of temples	268
308 Existing remains of Greek architecture	270
309 Existing remains of Doric temples	272
310 Existing remains of Ionic temples	273
311 Existing examples of the Corinthian order	275
312 Characteristics of the three orders	276
313 The Parthenon	276

IV. 3. SCULPTURE. By Sir CHARLES WALDSTEIN, Litt.D., Fellow of King's College, and R. C. BOSANQUET, M.A., Trinity College, Professor of Classical Archaeology in the University of Liverpool.

A. ARCHAIC PERIOD (*circa* 650—500 B.C.).

314 Cretan and Peloponnesian Schools. Male and female types	279
315 Insular and Ionian Schools. Ionian sculpture outside Ionia	282
316 Athens: architectural sculptures in poros. Marble korai	283

B. PERIOD OF TRANSITION (*circa* 500—460 B.C.).

317 General impulses to progress	286
318 The nude male type	286
319 Anatomy and drapery. Sense of beauty	289
320 Schools of Argos, Sicyon, Aegina. The Aegina pediments	289
321 Schools of Rhegium and Athens	292

C. PERIOD OF MATURITY (*circa* 460—400 B.C.).

322 Pheidias: his achievement. The Athena Parthenos	294
323 Earlier and later periods of Pheidias	295
324 Sculptures of the Parthenon	295
325 Polycleitus	298
326 Transition to the fourth century masters	300

D. THE GREAT SCULPTORS OF THE FOURTH CENTURY.

327 Schools of the fourth century. Choice of subjects	301
328 Scopas	302
329 Timotheus and Leochares	305
330 Praxiteles. Draped female statues	305
331 Lysippus	308
332 Portraits of Alexander: statues of athletes	308

E. HELLENISTIC PERIOD (*circa* 320—31 B.C.).

333 Hellenistic period	310
334 The gods in Hellenistic Art	312
335 Progress of Portraiture	312
336 Hellenistic reliefs	313
337 School of Pergamum	314
338 The Great Altar of Pergamum	315
339 Minor Asiatic schools	316
340 Sculpture at Alexandria and at Antioch	316
341 School of Rhodes	317
342 Continuity of the Athenian school	318
343 Greek sculpture in Rome	320

F. GRAECO-ROMAN PERIOD (31 B.C. *onward*).

344 The academic tradition under the Empire	321
---	-----

IV. 4. PAINTING. By F. R. EARP, M.A., formerly Fellow of King's College.

SECTION	PAGE
345 Sources of knowledge	322
346 Technical methods	323
347 Primitive period	324
348 Second period. Polygnotus. Micon and Panaenus	324
349 Third period. Transition. Zeuxis and Parrhasius. Timanthes	326
350 Fourth period. Fourth century. Sicyonian School. Attic School	326
351 Ionic School. Apelles	329
352 Fifth period. Hellenistic painting	330

IV. 5. VASE PAINTING. By A. H. SMITH, M.A., Trinity College, Keeper of Greek and Roman Antiquities in the British Museum.

353 Geometric Art	333
354 Oriental types	335
355 Rise of Attic School	336
356 Black-figure Style. Methods	337
357 Black-figure Style. Subdivisions	337
358 Panathenaic Vases	339
359 Black-figure Style. Subjects	339
360 Black-figure Style. Artistic capabilities	339
361 The Red-figure Style. Methods. Mechanical aids	340
362 Red-figure Style. Beginnings	341
363 Red-figure Style. Vases of the fifth century	342
364 Red-figure Style. Subjects	342
365 Names with <i>καλός</i>	343
366 Red-figure Style. Italian Schools	344
367 Red-figure Style. Italian Technique. The end of the Red-figure Style	344
368 White Athenian Vases	344

IV. 6. TERRACOTTAS. By H. B. WALTERS, M.A., King's College, Assistant Keeper of Greek and Roman Antiquities in the British Museum.

369 Extensive use of clay. Statuettes, seventh century. Sixth and fifth centuries	347
370 Tanagra figures	349
371 Use and purpose of the statuettes	351
372 Methods of production	351
373 Terracotta in architecture	353
374 Reliefs	353

IV. 7. GREEK BRONZE-WORK. By H. B. WALTERS, M.A.

375 Extensive use of bronze. Different processes	355
376 Extant works	357

IV. 8. GOLD AND SILVER WORK. By H. B. WALTERS, M.A.

377 <i>Τορευτική</i> . Etruscan work	360
378 Greece. Fourth century	362
379 Chased silver-work. Silver statuettes	365

IV. 9. GEMS. By WILLIAM RIDGEWAY, Sc.D., F.B.A., Disney
Professor of Archaeology and Brereton Reader.

SECTION	PAGE
380 Mycenaean Gems	366
381 Later development	368
382 Engravers	369

IV. 10. MUSIC. By the late R. D. ARCHER-HIND, M.A.,
Fellow of Trinity College.

383 Introduction	370
384 Diatonic scale	370
385 Structure of the scale	370
386 Modes	372
387 Keys	372
388 <i>χρόαι</i>	373
389 Notation	373
390 Part-writing	373
391 Instruments	374
392 Authorities	374

CHAPTER V.

MYTHOLOGY AND RELIGION.

MYTHOLOGY AND RELIGION. By E. A. GARDNER, Litt.D.

393 Introduction; local variations	375
394 National and local elements in religion. Methods of adopting new divinities	375
395 Various stages of belief and ritual. 'Chthonic' and 'Olympian' religion	376
395 <i>a</i> Worship of stones and trees, of animals, of the dead. Survivals	377

V. 1. MYTHOLOGY.

396 Various systems of interpretation of myths. 1. Myth as interpretation of ritual. 2. Myth derived from natural symbolism. 3. Myth as transformed historical tradition. 4. Myth derived from verbal resemblances. 5. Myth due to representations in Art. 6. Myth derived from allegory	379
397 Classification of myths. 1. Popular. 2. Official. 3. Poetical. 4. Philosophical	381
398 Cosmogony, Theogony, etc. Origin of the gods. Overthrow of the Titans and of the Giants. Origin of mankind	382
399 The principal gods; their number	384
400 1. Zeus, supreme god, ruler of heaven, lord of manhood and battle, of moral order, of political and social order, mono- theistic conception. Origin of cult, Thessaly. Dodona. Worship on mountains. Attic worship. Cretan tales of birth of Zeus. Consorts of Zeus. Representation in Art	384
401 2. Hera, character. Local cults. Representation in Art	387
402 3. Athena, character. Myth of birth, etc. Attic cult. Other local cults. Representation in Art	388

SECTION	PAGE
403 4. Apollo, character. Delian myth of birth and origin of worship. Local cults. Delphic cult. Association with animals. Representation in Art	389
404 5. Artemis, character. Identifications. Representation in Art	391
405 6. Hermes, character. Representation in Art	392
406 7. Dionysus, character, origin and myths. Representation in Art	393
407 8. Demeter and Persephone. 9. Hades	394
408 10. Poseidon	395
409 11. Aphrodite	395
410 12. Hephaestus	396
411 13. Ares	397
412 14. Hestia	397
413 Minor and attendant deities. 1. Olympian. 2. Of earth. 3. Of water. 4. Meteorological personifications. 5. Ethical personifications. 6. Foreign deities	398
414 Heroes	399

V. 2. RELIGIOUS INSTITUTIONS.

415 Introduction; various stages in ritual. Classification of the subject	399
416 A. Ordinary ritual. 1. Persons employed in worship. Head of family or State. Priests. Family cults. Religious associations. Appointments and privileges of priests	400
417 2. Places of worship. Physical reasons for sanctity. Social reasons for sanctity. Historical reasons for sanctity. Sacred places and buildings, precincts, altars, temples. Property of temples. Right of asylum	401
418 3. Manner of worship; sacrifice. Tributary sacrifice. Piacular sacrifice. Mystic sacrifice. Totemism doubtful for Greece. Appropriate offerings. Ritual of sacrifice. Prayer. Curses. Oaths	404
419 4. Times of worship	406
420 B. Extraordinary ritual. (a) Festivals. Civic festivals. The Panathenaic games	406
421 Confederate festivals. National festivals; the four great games	407
422 Athletic festivals; Olympia; institution of games. Order of celebration. The Altis at Olympia. Qualifications, rewards and competitors. Decline of athletic honours. Programme of games. The stadium; running. The pentathlon. Jumping. Throwing the disc. Throwing the javelin. Wrestling. Boxing. Chariot races	408
423 Musical festivals	413
424 Dramatic festivals. Origin of drama	414
425 Development in Athens. Great Dionysia and Lenaea. Order of celebration. Dress of actors. Theatre buildings. Origin. History of the theatre at Athens. Other Greek theatres. The stage question	415
426 Extraordinary ritual, (b) in manifestation. Oracles; divination. Dodona. Delphi	422
427 Healing shrines. Epidaurus	423
428 Mysteries. Eleusis; history of mysteries. Order of celebration. The Telesterion. Character and influence of the Mysteries	426

CHAPTER VI.

PUBLIC ANTIQUITIES.

- VI. I. CONSTITUTIONS. §§ 429—434 by F. E. ADCOCK, M.A.,
Fellow of King's College. §§ 435—472 by LEONARD WHIBLEY,
M.A., Fellow of Pembroke College.

A. DEVELOPMENT OF CONSTITUTIONS.

SECTION		PAGE
429	The earliest people	429
430	The invaders	430
431	Homeric Greece	430
432	The Tribal State. Formation of the city State	432
433	Character of the city State	433
434	Survivals of the tribal State. Elis. Thessaly	434
435	Forms of Union between States	435
436	Aristocracy	436
437	Lawgivers and Tyrants	437
438	Oligarchy	438
439	Democracy	439
440	Later development of Constitutions	440

B. ATHENS: HISTORY OF THE CONSTITUTION.

441	Legendary history of Athenian Constitution	441
442	Tribal organisation	441
443	Early government	442
444	Draco and Solon	442
445	Peisistratus	444
446	Cleisthenes	444
447	Changes in the fifth century	445
448	The constitution in the fourth century	446
449	Athens under the Macedonians and the Romans	447

C. ATHENS: THE CONSTITUTION IN ITS DETAILED ORGANISATION.

450	Metics	448
451	Citizens	448
452	Religious and political corporations	448
453	Magistrates in general	449
454	The Archons	450
455	Other administrative magistrates. Religious magistrates	451
456	Military magistrates	451
457	The Council of the Five Hundred	452
458	Powers of the Council	453
459	The Council of the Areopagus	454
460	The Assembly	454
461	Constitutional position of the law courts	455
462	Process of legislation	456

D. THE SPARTAN CONSTITUTION.

463	History of the Constitution	457
464	Classes of population. Perioeci	458
465	Spartiates	458
466	The Kings	458

SECTION	PAGE
467 Senate	459
468 Assembly	460
469 Ephors	460
470 Other magistrates	461
471 Education and discipline	461
472 Decline of Sparta and revolution	462

VI. 2. LAW. By WILLIAM WYSE, M.A., formerly Fellow of Trinity College, and F. E. ADCOCK, M.A.

A. EARLY LEGISLATION AND THE LAWS OF GORTYN.

473 Customary law	464
474 Early legislators	464
475 Laws of Gortyn: 1st period	465
476 Laws of Gortyn: 2nd period	466
477 Laws of Gortyn: Procedure	467
478 Laws of Gortyn: Judges and Arbitrators	467
479 Laws of Gortyn: archaic elements	468
480 Laws of Gortyn: new tendencies	469

B. THE ATHENIAN JUDICIAL SYSTEM IN THE FOURTH CENTURY.

481 Development of the Democratic Courts	471
482 <i>ἡγεμονία δικαστηρίου</i>	471
483 <i>οἱ θεσμοθέται</i>	472
484 <i>οἱ τετταράκοντα</i>	473
485 <i>οἱ δαιτηταί</i>	473
486 <i>οἱ εἰσαγωγεῖς</i>	474
487 <i>οἱ δικασταί</i>	474
488 Character of the courts	476
489 Jurisdiction of the Council and Assembly. <i>εἰσαγγελία</i>	477
490 <i>προβολή</i>	478
491 Trials for homicide. The five courts	479
492 Procedure	480
493 Public and private actions	480
494 <i>δίκαι πρὸς τινα</i> and <i>κατὰ τινος</i>	482
495 <i>ἀγῶνες ἀτίμητοι</i> and <i>τιμητοί</i>	482
496 Some special forms of public action	482
497 <i>φάσις</i>	483
498 <i>ἀπογραφή</i>	483
499 Normal course of an action, public and private	484
500 <i>ἀνάκρισις</i> : <i>παραγραφαί</i>	484
501 <i>ἀνάκρισις</i> : <i>διαμαρτυρίαι</i>	485
502 <i>ἀνάκρισις</i> : documentary proofs and witnesses	486
503 <i>πρόκλησις εἰς βάσανον</i>	486
504 <i>πρόκλησις εἰς ὄρκον</i>	487
505 The trial: date and adjournments	487
506 The trial: speeches	488
507 The trial: the voting	488
508 Penalties	489
509 Execution	489
510 Reversal of judgment	490

VI. 3. FINANCE. By M. O. B. CASPARI, M.A., Reader in
Ancient History at University College, London.

SECTION	PAGE
511 City States. General principles	491
512 Athens. Expenditure	492
513 Revenue. Tribute	493
514 Extraordinary Revenue. Total revenue	494
515 The ordinary liturgies	495
516 The trierarchy	496
517 Financial administration	496
518 Financial officers. Control of accounts	497
519 Federations	498
520 Monarchies	499
521 Temples—Athens, Delphi, Delos	500

VI. 4. POPULATION. By R. J. G. MAYOR, M.A., formerly
Fellow of King's College.

522 Nature of the evidence	502
523 Official registers at Athens	503
524 Number of Athenian citizens	503
525 Women and children at Athens	504
526 Slave population	504
527 Sparta	505
528 Other Greek States	505
529 Movement of population	506

VI. 5. SLAVES AND SLAVERY. By R. J. G. MAYOR, M.A.

530 Forms of slavery	507
531 Slavery in Homeric times.	507
532 Origin of serfdom. Helots	507
533 Other classes of serfs	508
534 Growth of personal slavery	509
535 Enslavement of Greeks	509
536 Barbarian slaves	510
537 Legal position of slaves	510
538 Price of slaves	511
539 Employment by the State.	511
540 Employment by private owners	511
541 Development of slavery	512
542 Names of slaves	513

VI. 6. COLONIES. By H. J. EDWARDS, M.A., C.B., Fellow
of Peterhouse.

543 Hellenic expansion	513
544 Causes of colonisation	514
545 Procedure	514
546 Characteristics of the colony	515
547 Effects	516
548 Cleruchies	516

VI. 7. COMMERCE AND INDUSTRY. By H. J. EDWARDS, M.A.

SECTION	PAGE
549 Pioneers of Mediterranean commerce	518
550 Greek expansion	518
551 Trade-routes and centres	519
552 Sea-routes	519
553 Land-routes	520
554 Export industries. (a) Wool. Spinning. Weaving	520
555 (b) Wine and oil	521
556 (c) Metallurgy. (1) Mining. (2) Metal-work	521
557 (d) Ceramic industries	522
558 Lesser industries	523
559 Trade. (a) Wholesale	523
560 (b) Retail trade.—Markets	524
561 Regulation of trade	524
562 Bankers in business	525
563 Companies	526
564 Loans	526
565 Commercial and industrial classes	527
566 Associations of workmen	527
567 Wages	528
568 The status of Commerce and Industry	528

VI. 8. MEASURES AND WEIGHTS. By WILLIAM RIDGEWAY, Sc.D.

A. MEASURES.

569 Origin of standards	530
570 Standards of length	531
571 Road measures	531
572 Land measures	532
573 Measures of capacity	533

B. WEIGHTS.

574 Origin of weight standards	533
575 Weights for gold and silver	534
576 Weights for merchandise	534
577 Aeginetic system	535

VI. 9. MONEY. By WILLIAM RIDGEWAY, Sc.D.

578 Mycenaean and Homeric Age	536
579 The origin of coinage	537
580 Lydian and Persian coinage	538
581 Coin types	540
582 Electrum coins of the Ionian cities	540
583 Silver coinage	541
584 Coinage on the mainland of Greece	542
585 Weight standards of coinage	543
586 Coin types in silver	544
587 Origin of coin types	546
588 Table of Attic coins	547

VI. 10. WAR. By C. W. C. OMAN, M.A., Chichele Professor of Modern History in the University of Oxford.

SECTION		A. ARMS AND ARMOUR.		PAGE
589	Hoplite equipment. Defensive armour. Shield			548
590	Lance and sword			550
591	Cavalry			551
592	Light infantry			552
B. TACTICS.				
593	Homeric warfare			552
594	Predominance of cavalry			552
595	Hoplite tactics			553
596	Use of light-armed troops.			554
597	Drill and organisation of the Spartans			554
598	Mercenaries			555
599	Developments in the fourth century			555
600	Tactics of Philip			556
601	Battles of Alexander			558
602	Successors of Alexander			558
C. FORTIFICATION AND SIEGE-CRAFT.				
603	Primitive citadels			560
604	Fortified cities			561
605	Siege-craft			562
606	Siege of Syracuse			562
607	The Carthaginians and Dionysius			564
608	Philip and Alexander			565
609	Later developments			565

VI. 11. SHIPS. By A. B. COOK, M.A., Reader in Classical Archaeology, Fellow of Queens' College.

610	Prehomeric ships			567
611	Homeric ships			568
612	Details of Homeric ships			570
613	Hesiodic ships			571
614	Penteconters			571
615	Long-boats			574
616	Round-boats. Other types			576
617	Origin of triremes			578
618	Usual theory of the trireme			578
619	Another theory of the trireme			580
620	Details of the trireme			582
621	Quadriremes and quinqueremes			584
622	Vessels of exceptional size. ἡμιολία or τριημιολία			584
623	Evolution of warships			586
624	Naval warfare			586
625	Speed of ancient vessels			587

VI. 12. THE CALENDAR. By JAMES GOW, Litt.D.

626	The Day			589
627	The Seasons			589
628	The Month			589
629	The Year			590
630	Intercalation			591

CHAPTER VII.

PRIVATE ANTIQUITIES.

VII. 1. A TABLE OF THE RELATIONSHIPS OF A MAN.
By JAMES GOW, Litt.D.

SECTION	PAGE
631	592

VII. 2. RITUAL OF BIRTH, MARRIAGE, AND DEATH.
By Miss J. E. HARRISON.

632 Birth	593
633 Marriage	594
634 Death and burial	595
635 Funeral monument	596

VII. 3. EDUCATION. By the late A. S. WILKINS, Litt.D.,
formerly Professor of Latin in the Owens College.

636 Homer, Crete and Sparta	597
637 Schools	598
638 Home training of children: games	599
639 Education of girls	599
640 The pedagogues	600
641 Aim in education. Physical training	600
642 Reading and writing	601
643 Arithmetic and drawing	602
644 Literature	602
645 Music	603
646 Gymnastics	604
647 The Sophists	604
648 The Ephebi	605

VII. 4. BOOKS AND WRITING. By M. R. JAMES, Litt.D.,
Provost of King's College.

649 The papyrus roll	606
650 Parchment	607
651 Development of the Book	607
652 Quires of a Book	608
653 Illustration of Books	609
654 Writing materials	609
655 Libraries, etc.	610

VII. 5. THE POSITION OF WOMEN. By F. WARRE CORNISH,
M.A., formerly Fellow of King's College.

656 Women in Homer	610
657 Marriage in Homer	611
658 Hesiod's idea of woman	612
659 Women in the lyric poets	612
660 Sparta	612
661 Marriage and divorce	613
662 Legal position of women at Athens	614

SECTION		PAGE
663	General position of women, especially at Athens, (1) at home	614
664	General position of women (2) abroad	615
665	Amusements of women	616
666	Ἐταῖραι and Παλλακαί	616
667	Change of sentiment about women	616

VII. 6. DRESS. By Lady EVANS.

668	Minoan Dress	618
669	Homeric dress. Dress of men and women in Homer	622
670	Dress of historic times. Thucydides on the dress of the men (1. 6). Evidence of the monuments	624
671	Garments of historic Greece. The Dorian chiton of the women. Dorian chiton of the men	625
672	The Ionian chiton. The girdle	628
673	Outer garments of both men and women in historic times	628
674	Dress of children. Dress of foreigners	630
675	Materials. Colours of materials	630
676	Hair	631
677	Coverings of the head	631
678	Coverings of the feet	632
679	Conclusion	632

VII. 7. DAILY LIFE, ITS SURROUNDINGS, EMPLOYMENTS AND AMUSEMENTS. By E. A. GARDNER, Litt.D.

A. TOWN LIFE.

680	General aspect and arrangement of a Greek town	633
681	The agora	633
682	Houses and streets	634
683	Town life. Divisions of the day. Divisions of the night	634

B. COUNTRY LIFE—AGRICULTURE, ETC.

684	Country life	636
685	Agriculture	638
686	Vines, olives, fruit	638
687	Gardens	638
688	Pasturage and hunting	639

C. FOOD AND DRINK, MEALS, COOKING, AND ENTERTAINMENTS.

689	Food in Homer; abundance of meat. Later custom; farina- ceous diet and ψρον	639
690	Meat from sacrifices. Game, fish, etc.	640
691	Drinks, milk, etc., wine, honey	640
692	Times of meals. Cooks	641
693	Entertainments. Manner of eating	642
694	Symposia. Cottabus	643
695	Common banquets. Public dinners	643

D. EXERCISE, GAMES, BATHS.

696	Physical exercise	644
697	Games with ball, etc.	645
698	Baths	645

		E. TRAVELLING.	PAGE
SECTION			
699	Causes of travel		646
700	Entertainment of travellers		647
701	Means of travel		647
VII.	8. HOUSE AND FURNITURE. §§ 702—709 by A. J. B. WACE, M.A. §§ 710—713 by E. A. GARDNER, Litt.D.		
702	Sources of knowledge		649
703	The prehistoric house in Crete		651
704	Minoan houses		651
705	The Palace at Cnossus		651
706	The Cyclades		653
707	South-Eastern Greece, Tiryns		653
708	Northern Greece		655
709	The Homeric House		655
710	House of historical times		656
711	House of Hellenistic times		659
712	Materials of houses		660
713	Furniture and vessels, etc.		661
VII.	9. MEDICINE. By Sir T. CLIFFORD ALLBUTT, M.D., K.C.B., F.R.S., Regius Professor of Physic.		
714	Medicine in general		663
715	Temple medicine		664
716	Medical schools		664
717	Rational medicine		665
718	Treatment at Temples		665
719	Medical guilds		666
720	Hippocrates		667
721	Private and Public practice		668
722	Treatment		669
723	Later development		670
 CHAPTER VIII. CRITICISM AND INTERPRETATION. 			
VIII.	1. DIALECTS. By the late R. A. NEIL, M.A., Fellow of Pembroke College, and P. GILES, Litt.D., Reader in Comparative Philology, Master of Emmanuel College.		
724	Spoken and literary dialects. Diversity of dialects in Greece		671
725	Language of the pre-Hellenic people		671
726	Dialectic differences		672
727	Classification of dialects		672
728	Arcadian and Cyprian		673
729	Aeolic		675
730	Ionic.		677
731	Attic.		678
732	Epic.		680
733	Doric		681
734	Northern Doric		684
735	Dialect of the choral poets		685
736	The κοινή διάλεκτος.		686

VIII. 2. EPIGRAPHY. By the late E. S. ROBERTS, M.A., University Lecturer in Epigraphy, Master of Gonville and Caius College, and E. A. GARDNER, Litt.D.

SECTION	PAGE
737 Definition and scope	687
738 Origin and composition of the Greek alphabet	688
739 Local alphabets	691
740 Further development of the Ionic alphabet	694
741 Systems of writing	696
742 Ligatures, Abbreviations, Compendia, Stenography	696
743 Punctuation	698
744 Numeral signs	698
745 Syntax of inscriptional language	699
746 Determination of date	699
747 Classification and formulæ of inscriptions	700
748 Honorary, Dedicatory and Sepulchral Inscriptions	702
749 Inscriptions on Property or Buildings. Names of Artists	702
750 Ephebic inscriptions	703
751 Annual Accounts of Magistrates, etc. Official name-lists	703
752 Legal documents, etc.	704

VIII. 3. PALAEOGRAPHY. By E. H. MINNS, M.A., University Lecturer in Palaeography and Fellow of Pembroke College.

753 Definition	705
754 Changes in writing: book and cursive hands	705
755 Influence of material	706
756 Uncial and Minuscule	706
757 Ptolemaic writing	707
758 Roman book hand	710
759 Vellum uncial	711
760 Adaptation of cursive to books	712
761 Older minuscule	713
762 Middle minuscule	714
763 Late minuscule	715
764 Placing MSS.	716
765 Abbreviations	717
766 Accents, Punctuation, etc.	718
767 Dated MSS.	719

VIII. 4. TEXTUAL CRITICISM. By the late Sir RICHARD C. JEBB, Litt.D.

768 Office of textual criticism	720
769 Internal evidence of readings. Intrinsic probability. Transcriptional probability	720
770 Known causes of corruption in MSS. Accidental errors. Changes deliberately made	721
771 Such an analysis is helpful: but it is necessarily incomplete. Limited validity of critical canons	724
772 Internal evidence of documents. General character of a MS.	724
773 Every MS. has traits peculiar to itself	725
774 Genealogy of MSS.	725

SECTION	PAGE
775 Mode of tracing genealogy	726
776 Mixture	726
777 Case in which one extant MS. is the parent of all the rest	726
778 Partial reconstruction of a lost archetype	727
779 Evidence of groups, not genealogical. Inconclusiveness (<i>a</i>) of mere number, and (<i>b</i>) of age	728
780 Documents in supplement of MSS. (1) Ancient quotations. (2) Scholia. (3) Old translations	729
781 Errors anterior to our documents	730
782 Emendation traceable in MSS.	731
783 Modern use of conjecture	731
784 Arrangement of apparatus criticus	732
785 Conclusion	733

VIII. 5. METRE. By the late A. W. VERRALL, Litt.D.,
Fellow of Trinity College.

786 'Longs' and 'shorts'	734
787 Foot, verse, thesis, arsis	734
788 Hiatus and syllaba anceps	735
789 Hexameter, Caesura, Elegiac, Anacrusis	735
790 Anapaests	736
791 4-time and 3-time	737
792 Trochee, Iambus, Trochaic dactyl and spondee	737
793 Variety of combinations. Stanza	738
794 Typical combinations: Choriambus, Bacchius, Cretic, Paeon	738
795 Glyconic, 'Basis,' Dochmiac	739
796 Ionic	740
797 Recitation, Trochaic Tetrameter, 'Iambic trimeter'	740
798 Chorus, Strophe	740
799 Ambiguities	741

VIII. 6. HISTORY OF SCHOLARSHIP. By Sir JOHN
SANDYS, Litt.D., F.B.A., Public Orator.

800 Division of periods	742
801 Alexandrian period. Zenodotus. Callimachus. Eratosthenes. Aristophanes of Byzantium. Aristarchus. Apollodorus. Ammonius. Dionysius Thrax. Didymus. The Stoics. Crates of Mallos	742
802 Graeco-Roman period. Dionysius of Halicarnassus. Caecilius of Calacte. Anon. <i>περὶ ἔψους</i> . Apollonius Dyscolus. Herodian	744
803 Early lexicographers, etc.	745
804 Byzantine period. Libanius. Hesychius. Stephanus of Byzantium. Stobaeus. Photius. Suidas. Psellus. 'Etymologicum Magnum.' Tzetzes. Eustathius. Gregorius Corinthius. Planudes. Moschopoulos. Thomas Magister. Theodorus Metochites. Triclinius	745
805 Manuscripts. Scholia	747
806 Western Europe	748
807 The Italian Renaissance. Petrarch. Boccaccio. Greek Immigrants. Chrysoloras. Plethon. Bessarion. Theodorus Gaza. Georgius Trapezuntius. Argyropoulos. Chalcondylas. Constantine Lascaris. Janus Lascaris. Musurus	749

SECTION	PAGE
808 Italian humanists. Leonardo Bruni. Cyriacus of Ancona. Guarino. Aurispa. Filelfo.	751
809 Traversari. Laurentius Valla. Ficino. Politian. Victorius. Robortello	752
810 France. Budaeus. R. Stephanus. H. Stephanus. Turnebus. Lambinus. J. J. Scaliger. Casaubon. Salmasius. Valesius. Du Cange. Montfaucon. Brunck. Schweighaeuser. Villoison. Boissonade. Egger.	753
811 The Netherlands. Erasmus. First period. Canter. Second period. Meursius. Third period. J. Gronovius. Hemsterhuis. Fourth period. Valckenaer. Ruhnken. Wyttenbach. Cobet. Denmark. Madvig.	754
812 England. First period. Linacre. Second period. Elizabethan translators. Savile. Selden. Gataker. Milton. Barnes. Dodwell. Third period. Bentley. Fourth period. Porson. Greek scholars at Cambridge. Greek scholars at Oxford. Historians of Greece. Greek archaeologists.	756
813 Germany. Reuchlin. Melanchthon. Sylburg. Fabricius. Reiske. Winckelmann. Eckhel. Heyne. F. A. Wolf. G. Hermann. Lobeck. Lehrs. Meineke. Bergk. W. Dindorf. Nauck. Bekker. Lachmann. Ritschl. Grammarians; Demosthenic and Aristotelian scholars. Boeckh. Welcker. K. O. Müller. Schömann. K. F. Hermann. Jahn. E. Curtius. G. Curtius. Holm. Bursian	758
I. INDEX OF PERSONS, DEITIES AND RACES	762
II. INDEX OF PLACES	767
III. INDEX OF SCHOLARS AND MODERN WRITERS	771
IV. INDEX OF GREEK WORDS AND PHRASES	773

LIST OF ILLUSTRATIONS.

FIG.	PAGE
1 The <i>ὑάκινθος</i> of Homer	56
2 Inflorescence of <i>ὑάκινθος γραπτά</i>	56
3 Asphodel	57
4 <i>a</i> Rice-wheat	59
4 <i>b</i> One-grained wheat	59
5 Polychrome vase of Middle Minoan II style	238
6 Faience plaque from Cnossus	239
7 Strainer of Late Minoan II style	241
8 Miniature frescoes from Cnossus	242
9 Bull's head in relief in painted stucco from Cnossus	242
10 Ivory figurine from Cnossus	243
11 Seal impressions of Minotaurs from Zakro	244
12 Seal impression with heraldic animals from Crete	244
13 Marble figurines from the Cyclades	246
14 Fresco of flying fish from Phylakopi	248
15 Reconstructed vase of second Mycenaean period from Mycenae	250
16 The gold cups from Vaphio in Laconia	250
17 Gold ring from Mycenae	251
18 Scene on the Warrior Vase from Mycenae	252
19 Vase of red on white ware from the Spercheus valley	253
20 Reconstructed drawing of steatopygous statuette from Thessaly	254
21 Terracotta statuette from Thessaly (Fourth Period)	255
22 Reconstructed drawing of Minoan shrine on a fragment of fresco from Cnossus	258
23 Section of the Treasury of Atreus at Mycenae	260
24 The Acropolis	264
25 Doric Order (Aegina)	265
26 Ionic column (Priene)	266
27 Attic column (Erechtheum).	267
27 <i>a</i> Plans of Temples	269
28 Temple of Olympian Zeus at Athens	271

FIG.		PAGE
29	Temple of Nike Apteros	273
30	Temple of Poseidon at Paestum	274
31	Choragic Monument of Lysicrates	275
32	The Parthenon	277
33	Statue by Polymedes of Argos, one of a pair representing Cleobis and Biton, found at Delphi	280
34	Marble statue dedicated by Nicandra, from Delos	281
35	Kore of Attic workmanship on the Acropolis	284
36	Kore showing Ionic influence	285
37	'Apollo' of Tenea	287
38	The Choiseul-Gouffier Athlete	288
39	The Charioteer, from Delphi	290
40	The Discobolos of Myron	291
41	The Athena of Myron	293
42	'Theseus' from the East Pediment of the Parthenon	296
43	The Fates, or Hestia, Gaia and Thalassa, from the Parthenon	296
44	Horsemen, from Frieze of the Parthenon	297
45	Doryphoros of Polycleitus	298
46	Diadumenos of Polycleitus	299
47	Eirene with infant Plutus	301
48	Sepulchral monument of Hegeso at Athens	303
49	Heads from Tegea	304
50	Aphrodite of Cnidus, Vatican	306
51	Hermes with infant Dionysus, by Praxiteles	307
52	Apoxyomenos, attributed to Lysippus	309
53	Niobed, in the Vatican	311
54	The Dying Gaul	314
55	From the Frieze of the altar of Pergamum	316
56	The Nile	317
57	Laocoon	319
58	Marble Relief of Antinous	321
59	Vase illustrating the style of Polygnotus	325
60	Painting on marble from Herculaneum	327
61	Woman's head from the Crimea. Late fourth century B.C.	331
62	Pyxis of Geometric Ware	333
63	Vase of Geometrical Style. Subjects: a funeral procession and mourners. A procession of chariots	334
64	Corinthian pottery	335
65	Rhodian Plate. Subject: Winged Gorgon	336
66	Black-figure Amphora. Subject: Hermes leading the goddesses to Paris	338
67	A part of a vase by Andocides	340
68	Red-figure Kylix. Subject: Young warrior	341

FIG.	PAGE
69 Red-figure jar (Stamnos). Subject: Combat of Horseman and Foot-soldier	343
70 Late Red-figure Amphora, Apulian shape. Subject: Toilet scene	345
71 White Athenian Vases	346
72 Greek Statuettes from Rhodes and Sicily (Archaic Period)	348
73 Greek Statuettes from Tanagra (third century B.C.)	350
74 Mould for Terracotta figure, from Tarentum	352
75 Archaic relief from Rhodes (about 480 B.C.)	354
76 Bronze foundry, from a vase-painting at Berlin	356
77 Bronze relief from the river Siris	357
78 Greek mirror with engraved design	359
79 Phoenician metal bowl	361
80 Gold ornaments from the Crimea	363
81 Silver chased vase from the Crimea	364
82 Greek earrings from Kertch	365
83 Impression from an early Babylonian cylinder	367
84 Example of a lenticular gem of heraldic type, in rock crystal	367
85 Greek scarab of the sixth century B.C. of the finest archaic style	368
86 Gem of the fifth century B.C.	368
87 Greek scarab-gem of the best period of Art	368
88 Fine portrait gem of the third century B.C.	369
89 The Acropolis at Athens, from the S.W.	403
90 Plan of Olympia	409
91 Starting-place in Stadium at Olympia	412
92 The Theatre at Epidaurus	418
93 Theatre at Epidaurus	419
94 Precinct of Apollo at Delphi	424
95 Delphi	425
96 Hall of the Mysteries at Eleusis	427
97 Attic Half-mina (Roman period) belonging to the ἀγοράνόμος ('Clerk' of the Market)	535
98 Cyzicene Stater weight	535
99 Aeginetan Hemitetarton ($\frac{1}{8}$ Mina)	535
100 Cyzicene Half-stater weight	535
101 Lydian electrum coin	539
102 Coin of Croesus	539
103 Persian Daric	540
104 Potin coin of Mytilene	542
105 Tetradrachm of Athens	544
106 Coin of Boeotia	544
107 Coin of Euboea	545
108 Coin of Croton	545
109 Coin of Thurii	545

LIST OF ILLUSTRATIONS

XXXV

FIG.		PAGE
110	Coin of Metapontum	545
111	Coin of Messana	545
112	Coin of Cyrene	546
113	Coin of Rhoda in Spain	546
114	Coins of Olbia, in the form of tunny fish	546
115	Coin of Tenedos	547
116	Coin of Salamis in Cyprus	547
117	Hoplite with Corinthian helmet, and Boeotian shield. Bronze statuette	549
118	Combatant warriors, from a fifth century vase	550
119	Battle of Mantinea (362 B.C.)	557
120	Battle of Arbela	559
121	Plan of Syracuse to illustrate the siege	563
122	Ships on early Cretan seal-stones	567
123	Terracotta boat (coracle?) from Phylakopi	567
124	Ship on a Boeotian <i>fibula</i>	571
125	Ship on a Rhodian <i>pinax</i>	572
126	Ship on the François vase	572
127	Ship on a 'Dipylon' vase	573
128	War-ship on a <i>lebes</i> from Thebes	574
129	Ivory relief of a war-ship from Sparta	574
130	War-vessel on a <i>kylix</i> from Vulci	574
131	Merchant-vessel on a <i>kylix</i> from Vulci	576
132	Model of ship with turrets from Amathus	576
133	Boar-shaped vessel on an Etrusco-Ionian <i>krater</i>	577
134	Bird-shaped vessel on an Etrusco-Ionian <i>krater</i>	577
135	Waist of a war-vessel on a relief from Athens	579
136	Arrangement of rowers in a mediaeval trireme	580
137	Carrying Liknon in marriage procession, from a black-figured amphora	594
138	Scene at grave-mound surmounted by a stele, from a black-figured lekythos	596
139	Vase-painting by Duris, on a cylix	603
140	'Snake goddess' from Cnossus	618
141	Lady of the Palace of Hagia Triada	619
142	Fresco painting of girl from Cnossus	620
143	Cupbearer from Cnossus	621
144	Gem from Vaphio	622
145	Wall-painting from Cnossus	623
146	Dorian chiton open at the side	624
147	Women wearing the Ionian chiton	624
148	Scheme of the open Dorian chiton	625
149	Scheme of the closed Dorian chiton	625

FIG.	PAGE
150 Girl wearing the closed Dorian chiton	626
151 From the Varvakeion statuette	627
152 Scheme of the peplos of Athena	627
153 Scheme of the Ionian chiton	628
154 Sophocles in the Lateran, Rome	628
155 Hesiod's plough— <i>Works and Days</i> , 427—436	637
156 Ploughing; from a vase by Nicosthenes	638
157 Greek banquet; from a vase by Duris	643
158 Scene in a public bath; from a vase	646
159 Travelling; Dionysus disguised as Heracles, and the slave Xanthias with pack, on a donkey or mule. Scene from <i>The Frogs</i> , on a vase	648
160 Minoan Houses, Plan and Elevation	650
161 The Palace at Cnossus	652
162 The Palace at Tiryns	654
163, 164 Restoration and Plan of a house at Priene	657
165 House on Delos	658
166 Plan of a House at Priene	659
167 Scene in a Greek house, showing furniture, etc.; from a vase	661
168 Priam and Achilles, and scene in a house, showing chairs, couch, table, etc.; from a vase	662
169 Clay tablet with incised writing found at Cnossus	688
170 Clay disc with impressed characters found at Phaestus	689
171—186 Inscriptions	693, 695, 697
187 MS. Timotheus of Miletus	707
188 MS. Wooden Money Bill	708
189 MS. Bacchylides	709
190 MS. Commentary on the <i>Theaetetus</i>	710
191 Codex Sinaiticus	711
192 MS. Lease of a house	712
193 Codex Vaticanus	713
194 Codex Monacensis	714
195 MS. Teaching of the Twelve Apostles	715
196 MS. Commentary on Ecclesiastes	716
197 MS. Suidas	717

MAPS.

Northern Greece	To face p. 8
Athens and Harbours of Athens	" " 12
Central Greece and the Peloponnese	" " 16
Aegean Sea and Coast of Asia Minor	" " 20
The Greek Colonies	" " 22

I. GEOGRAPHY, ETHNOLOGY, FAUNA AND FLORA.

I. I. GEOGRAPHY.

I. THE development of the Hellenic race, and the influence which it has exercised on mankind at large, were greatly affected by the position of the land which the Greeks inhabited, and by its peculiar characteristics. Greece was the most central country in the ancient world, or at least enjoyed more than any other the advantages which such a situation affords; for though in reality Egypt and Syria were more central, owing to their lying in closer proximity to the meeting-point of the three great continents, yet there were insuperable difficulties to prevent either of them from undertaking the part which was performed by Greece. The harbourless shore of Palestine precluded its inhabitants from holding communication by sea with other countries; and in the case of Tyre, which formed a marked exception to this rule, the narrow commercial policy which prevailed in that state was an effectual bar to hinder her from promoting human advancement on a large scale. Egypt, again, from being confined within the Nile valley, and being dependent on that river for her existence, was too self-centred to be desirous either of adopting ideas from abroad, or of imparting to others her long accumulated stores of knowledge. But Greece, while it lay on the threshold of Europe relatively to the eastern countries, was from its conformation eminently a receptive country. It occupied somewhat the same position in antiquity which England holds at the present day, as being the point of communication between the old world and the new, so that whatever ideas passed from the one to the other passed through it, and were liable to be modified by its influence. And the numerous bays and harbours which are found on its eastern coasts provided an easy access to traders from that quarter, while the islands of the Aegean, and especially the long line of Crete, facilitated their approach. On the other hand, Italy and Greece may be described as standing back to back to each other, for the outlets of the former of these countries are towards the west, and the eastern shores of the Adriatic are singularly destitute of good harbours. In consequence of this there was at first little intercourse between them,

Position of
Greece.

so that the nationalities which inhabited them were developed independently of each other, and it was not until Greek culture had reached its maturity that Italy was largely affected by it.

2. Few countries in the world possess characteristics so strongly marked as those of Greece. Its coast is indented in an extraordinary manner with numerous inlets, both large and small, so that its length is out of all proportion to the area of the country.

General characteristics.

This peculiarity becomes more striking as the land advances farther towards the south, for the shores of Epeirus and Thessaly present for the most part an unbroken outline, except where the land-locked Pagasæan gulf penetrates into the last-named district. To the southward of those provinces a waist is formed, where the Ambracian and Maliac gulfs approach each other from opposite sides; and from that point onward the coast becomes more varied, especially where it skirts the Euboic sea and the Corinthian gulf, until the Isthmus of Corinth is reached. There the peninsular formation of Greece is still more conspicuous, and its variety of outline culminates in the Peloponnese, which is pierced by the Messenian, the Laconian, and the Argolic gulfs. The mountains of Greece, also, which ramify through the whole country, and form a part of every view, are peculiar in their character. Though none of these rise above 8,000 feet—with the single exception of Olympus, which nearly reaches 10,000—yet their general elevation is very considerable, and many of them are covered with snow for several months of the year. As many as twenty-five are over 3,000 feet in height, and seven of these, among which are included the famous names of Parnassus, Taygetus, Cyllene and Erymanthus, are between 7,000 and 8,000 feet. These mountains are nowhere irregularly jumbled together, but are carefully grouped and delicately articulated, so that they possess the features to which the term 'classical' is usually applied. The hard limestone of which they are composed breaks in such a manner as to produce sharp outlines, and from the same cause their buttresses are subdivided into clearly cut ridges. The rivers, owing to the shortness of their courses, which prevents them from attaining any considerable volume, are nowhere navigable except for boats, and it is only the larger streams, such as the Peneus, the Spercheus and the Alpheus, which have a perennial supply of water. The remainder are torrents, which are only filled after violent storms, or during the winter season, and for the rest of the year display a white stony bed. The lakes also are a remarkable feature, for they all without exception have no outlet for their waters, except such as is provided by subterranean passages. Notable instances are found in the Copaic lake in Boeotia, and in those of Pheneus and Stymphalus in Arcadia. This phenomenon arises from the conformation of the inland basins, which are so hemmed in by mountains that no aperture is left for the escape of the water. The result is that, when the subterranean passage, or *catavothra*, is choked, as often happens, the level of the lake rises; but when the obstacle which closed it is

removed, it falls, and sometimes the lake for a time disappears altogether. These changes, as might be expected, gave birth to numerous myths. The plains are in some cases upland levels, such as that of Mantinea, and sometimes maritime plains, like those of Athens and Argos, which are hemmed in on three sides by lofty mountains, and on the fourth are open to the sea. The variety of elevation which is illustrated by these instances is a characteristic of the whole of Greece, and had a marked influence on its climate. While the southern sun provided the element of genial warmth, the presence of the mountains and uplands furnished an inexhaustible supply of fresh breezes, and the temperature was everywhere rendered equable by the proximity of the sea. One more peculiarity remains to be noticed in the liability of the country to shocks of earthquake. This is explained by the circumstance that Greece lies close to a centre of volcanic agency, the exact locality of which is the island of Thera (Santorin). That volcano was famous in antiquity on account of the great eruption of 197 B.C., which Strabo has described, and it has been in activity within fifty years from the present time. On the mainland of Greece the mountain of Methana, on the coast of Argolis opposite Aegina, was formed by an eruption in 282 B.C. The occurrence of earthquakes is frequently mentioned in Greek history, and they seem in some measure to account for the disappearance of the monuments of antiquity throughout the country, many of which owing to their massive construction would otherwise in all probability have survived to our days.

3. Northern Greece is divided in two parts by the mountain chain of **Scardus** and **Pindus**, which forms a well-marked backbone, as it traverses the country from north to south, half-way between the Adriatic and the Aegean. The districts by which it is flanked on either side form a strong contrast to each other, for while Macedonia and Thessaly present extensive plains with rich alluvial soil, the lands towards the west—Illyricum, Epeirus, and Acarnania—are occupied by a confused mass of rugged mountains, diverging in different directions. The range of Scardus rises far away towards the north, and separates Upper Macedonia from Illyricum, extending as far south as Lyncestis; at this point Pindus commences, and when it reaches the north-west angle of Thessaly, it rises conspicuously in Mount Lacmon. This is an important position, because the principal rivers and mountains of northern Greece radiate from it. Here are the sources of the Aous, the Arachthus, and the Achelous, which flow towards the western sea, and those of the Peneus, and in part also those of the Haliacmon, which enter the Thermaic gulf. Here also the Ceraunian mountains diverge towards the west, until they reach the Adriatic at the Acroceraunian promontory, while on the eastern side the Cambunian chain is the connecting link between Pindus and the mighty mass of Olympus. That mountain forms a bastion, by which the approaches to Greece are guarded at the north-eastern angle; and from it proceed, following the sea-coast, first the two other Mountains of the

Northern
Greece.

Giants, Ossa and Pelion, together with the peninsula of Magnesia, and afterwards the line of summits which runs through Euboea, and is continued in the islands of Andros and Tenos, and others of the northern Cyclades. Again, at the southern termination of Pindus, near the head-waters of the Spercheus, and intermediate between the Maliac and Ambracian gulfs, stands the commanding summit of Tymphrestus, and from this the range of Othrys separates at right angles, overlooking the Maliac gulf, and extending as far as the straits of Artemisium and the entrance of the Pagasaeon gulf.

4. **Macedonia**, though it cannot properly be called a Hellenic land, since its inhabitants were not reckoned as belonging to that race, yet calls for notice, both because of its importance as commanding the entrance to Greece from the north, and because it was the birthplace of the great monarchy, which was destined to subjugate that country. Its determining feature is the river Axius (Vardar), which divides it in two parts, flowing from north to south; for whereas its western portion is chiefly occupied by elevated plains, deeply sunk among the mountains, of which the plain of Pelagonia is the most important, on the eastern side the ground stretches away towards Thrace, and partakes of the wild and irregular character of that region. In this direction at an early period the boundary of the two countries was the Strymon; at a later time Macedonia extended its limits as far as the Nestus. Between those two rivers, in the interior, lay Mount Orbelus, and this was connected with Scardus by a lower range, which separates from that chain in the neighbourhood of Lyncestis. The ancient capital, Edessa, stood at the point where the passes from that district enter Lower Macedonia, and its position was worthy of the nursery of a great kingdom, for it is one of the most striking in Greece. It occupied a table of rock, which falls in front of it in steep precipices; and over these the river Lydias, which traverses the city by several channels, falls in numerous cascades. The later capital, Pella, was built on low ground nearer to the sea, on a site which had neither strength nor salubrity to recommend it. Thessalonica, the chief city under the Romans, was finely situated at the head of the Thermaic gulf, where it commanded the trade with the interior of the country; it was also the terminus of the western half of the Egnatian Way, which, starting from Dyrrhachium on the Adriatic, connected the two seas, and for many centuries formed the main line of communication between Rome and her eastern provinces. The coast, which extends from Thessalonica to the foot of Mount Olympus, was bordered by a rich plain, which is watered by the Axius, the Lydias, and the Haliacmon; and the northern slopes of that mountain, and also those which descend from its flanks towards the sea, formed Pieria, the home of the Muses before their worship was transferred to Helicon. Here the town of Pydna was situated, in the neighbourhood of which Perseus, the last king of Macedon, was defeated by the Romans. The mountains which bounded this region on the west, extending northward from Olympus, were called the Bermian chain.

5. The peninsula of **Chalcidice**, which projects from the coast of Macedonia into the north of the Aegean, bears a striking resemblance to the Peloponnese from the three promontories in which it ends; and even in the shape of its mountains and its vegetation it seems to belong rather to southern than to northern Greece. It is not unnatural, therefore, that from an early time it should have been fringed with Greek colonies; these, as its name implies, were planted chiefly by settlers from Chalcis in Euboea. The easternmost of its three projections, which was called Acte, is joined to the continent by an isthmus about a mile and a half broad, where the remains of Xerxes' canal are still visible. From this point it extends for about 40 miles, until at its extremity it throws up the vast conical peak of Athos, which is 6,400 feet in height. This mountain, owing to its great elevation and its solitary position, has at all times been dangerous to navigators from its liability to attract storms, as the Persians discovered when the fleet of Mardonius was wrecked on its coasts. The central peninsula of the three, Sithonia, though mountainous, is less so than Acte, while the third, Pallene, is comparatively level. Near the end of Sithonia the town of Torone was situated, and close to the isthmus of Pallene, which is narrower than that of Athos, being only half a mile wide, lay the important Corinthian colony of Potidaea. At no great distance from it, at the head of the Toronaic gulf, was Olynthus. On the land side of the isthmus of Acte the city of Acanthus was situated, and at some distance to the north of it, at the point where the Strymon issues from the lake Prasias or Cercinitis, stood Amphipolis, with the port of Eion at the mouth of that river.

6. **Thessaly** was a semi-Hellenic country in respect of its population, and in its geography it partially resembled the districts which were occupied by the Hellenes. Its inhabitants, though more closely related to the Greeks than were the Macedonians, were not of the pure Hellenic stock; and the land, though it presents a definite organisation, which is not to be found farther north, is neither maritime nor mountainous to the same degree as southern Greece. Its vast plain is the most extensive that is found in the whole peninsula, and by the Greeks it was believed originally to have been a lake, until an escape was provided for its waters by the formation of the ravine of Tempe between Olympus and Ossa, which was created by a stroke of the trident of Poseidon the earth-shaker. It is enclosed by well-marked mountain barriers: on the north by the Cambunian range, on the west by Pindus, on the south by Othrys, and towards the sea by Ossa and Pelion, which form a continuous chain—'mingling their roots with one another,' as Herodotus says—while Olympus rises to the northward of Ossa, and completes the line of circuit. These mountains formed the outworks of the defences of Greece, but they could be traversed by passes at various points. The most famous of these was **Tempe**, which, while it deserved the character of a beautiful and romantic vale which the poets have attributed to it, was at the same time a difficult and easily defensible passage. It is a winding chasm, about four miles

and a half in length, flanked on either side by precipices of grey limestone, which rise in places to a height of from 500 to 1000 feet; but the features of the scene are everywhere softened by the copious stream of the Peneus which winds between, and by the luxuriant vegetation which accompanies it, and the glades that at intervals open out at the foot of the cliffs. The pass of Tempe, however, was of less importance than at first sight it appears to be, because it could be turned by another pass on the western side of Olympus from Petra in Pieria, which entered the Thessalian plain to the northward of Larissa; it was by this that Xerxes approached, and when the Greeks discovered the existence of this passage, they gave up all thoughts of defending Tempe. Again, towards the north-west, a pass led over Mount Lacmon from Epeirus, and followed the upper valley of the Peneus to Aeginium; by this route Caesar entered Thessaly before the battle of Pharsalia. Another, by means of which there was communication with the Ambracian gulf, passed over the Pindus chain to the southward of this, and descended into the plain at Gomphi. Finally, the great southern pass was that of Coela, which crosses Mount Othrys from the Maliac gulf nearly opposite Thermopylae; the importance of the town of Pharsalus arose from its guarding the approaches to it on the northern side. The whole of the wide area of Thessaly was drained by the **Peneus**. This river, after it has entered the plain at its north-west angle, describes an arc towards the south, and in this part receives the waters of a number of tributaries—the Enipeus, the Apidanus, the Onochonus and the Pamisus: the country which was drained by these was called Upper Thessaly, as being farther removed from the sea, while Lower Thessaly was the region between this and the slopes of Ossa and Pelion; they were separated from one another by a range of hills, which runs northward from Othrys in the direction of Larissa. After passing that city, and before reaching Tempe, the river at certain seasons of the year overflows the lower lands towards the south, and its inundations form the lake Nessonis; and, when that is full, they again escape, and pour themselves into the lake of Boebe. That lake has no outlet for its waters, for a watershed interposes between it and the Pagasæan gulf.

Politically, Thessaly was divided into four districts, Hestiaeotis, Thessaliois, Pelasgiotis, and Phthiotis. Of these, Hestiaeotis occupied the north-western portion, with Tricca for its chief city, while Thessaliois lay to the south-west. In the eastern portion of the latter of these, where the level ground runs up into an angle of the mountains, and is intersected by the stream of the Enipeus, was the plain of Pharsalia. Pelasgiotis was the eastern section, and contained the powerful cities of Larissa, Crannon and Pherae. Phthiotis, which occupied a position apart from the rest, in the south-eastern corner of the country, was a region of great importance in the heroic age, for Thucydides tells us that it was the original home of the Hellenic race, and from it the great Achilles was sprung. The Pagasæan gulf, also, on which it bordered, was celebrated in early story in

connexion with the expedition of the Argonauts, for the pinewood of which the Argo was built was cut on the neighbouring slopes of Pelion, and the towns of Pagasae and Aphetæ, which stood at the head and at the mouth of the gulf respectively, were regarded as the places where the vessel was constructed and from which it started on its voyage. The town of Iolcos, which was famous in the same connexion, lay under Mount Pelion, to the eastward of Pagasae; and close to it at a later period the city of Demetrias was founded by Demetrius Poliorcetes. This stronghold, which was of great importance as commanding the approach to Thessaly from this side, was called by Philip V of Macedon one of the three fetters of Greece, Chalcis and Corinth being the other two. The tribes which occupied the outlying portions of Thessaly were the Perrhaebi in the extreme north, the Magnetes along the range of Ossa and Pelion, and the Dolopes and Dryopes about the southern extremity of Pindus.

The history of Thessaly was influenced in a marked manner by its natural features. It was the temptation which the richness of its soil offered to invaders that induced the Thessalians to leave their home in Epeirus, and to expel from their early seats, first the Boeotians, and afterwards the Dorians, thus initiating the most important movements of the tribes to the southward of them. These broad acres also tended to foster aristocracy as the form of government, for they were in the possession of a few powerful families, such as the Aleuadae of Larissa and the Scopadae of Crannon, and were tilled for them by a serf population. And, as plains are specially suitable for the breeding of horses, the arm in which the Thessalians were strong in war was their cavalry, while the heavy-armed infantry, which in the rest of Greece was composed of the middle class, and was associated with free institutions, was excluded.

7. To the westward of Macedonia and Thessaly lay Illyricum and Epeirus, regions of bleak irregular mountains and upland valleys. The line of separation between them was formed by the Ceraunian chain, and **Illyricum**, which lay to the northward of it, was watered by several rivers, of which the Aous was the most important. At intervals along the coast were plains of some extent, and the exports which they afforded were the chief source of the prosperity of the neighbouring Greek colonies of Epidamnus (Dyrrhachium) and Apollonia. To the southward **Epeirus** extended as far as the Ambracian gulf, but the absence of harbours along its shores caused it to be for the most part an unknown land to the Greeks; indeed, its name Epeirus, or the Continent, implies that it was only known to them through the medium of the outlying islands. It comprised three regions: in the north-west Chaonia, which extended as far south as the river Thyamis; towards the east the inland district of Molottis; and to the south Thesprotia. Through Molottis flowed the chief river of the country, the Arachthus, which followed a course due south from its source in Mount Lacmon to the Ambracian gulf. Westward of this, in a valley of its own, lay the extensive lake Pambotis (Lake of Joannina), to

the south of which, at some little distance off, was the famous oracle of Dodona, the site of which has been recently discovered. It was probably the migration of the Thessalians from these parts which spread through the Greek world the renown of this oracle, and also that of the river Acheron, which flows through Thesprotia. The awe inspired by the deep and dark ravines, which that stream traverses in one part of its course, seems to have been the cause of its being associated with the infernal regions. At the point where it issues from these a large swamp called the Acherusian marsh is formed. To the north of the Ambracian gulf, within a bend of the Arachthus, the city of Ambracia was situated, and near its eastern coast that of Amphiloichian Argos; but the most famous place in that neighbourhood was Actium, the scene of the great defeat of Antony and Cleopatra by Augustus, which commands the mouth of the narrow strait by which that gulf is entered.

8. The mountains of central Greece start from Mount Tymphrestus, which, as we have seen, marks the termination of the chain of Pindus. To the south-west diverge the irregular Aetolian ranges; while to the east the well-marked line of Oeta runs parallel to Othrys on the southern side of the valley of the Spercheus and the Maliac gulf, after which it is continued under different names along the coast of northern Locris and Boeotia, until it reaches Attica, and after throwing up the pyramid of Pentelicus sinks into the sea at Sunium. Beyond this point it rises again in the western Cyclades—Ceos, Cythnos, Seriphos and Siphnos. But the most lineal descendants of the main chain of northern Greece are those which take an intermediate course between the other two, and first as Parnassus and Helicon pass through Boeotia, and then as Cithaeron and Parnes separate the latter of those countries from Attica. Finally, an offshoot from Cithaeron runs off to the southward, and forms the important mountain of Geranea, which blocks the approach to the Isthmus.

9. The districts which occupied the extreme west of this part of the country, Acarnania and Aetolia, exercised but little influence on the history of Greece. The most marked feature of **Acarnania** is the river Achelous (Aspropotamo), which on account of its abundant stream was famous in early Greek mythology. Owing to the amount of alluvium that it brought down, some of the Echinades islands, which lay off its mouth, were attached to the mainland; and the marshes which were formed at this point were the cause of the strength of the fortress of Oeniadae, which was situated about 10 miles from the coast. The chief town of Acarnania, Stratus, was built in a rich plain in the centre of the district on the right bank of that river. **Aetolia** also was intersected by a considerable stream, the Evenus, and between this and the Achelous lay an extensive lake, called Trichonis.

10. The district of **Malis** was situated between Mount Oeta and the south-western angle of the Maliac gulf. It was a small territory, but

NORTHERN GREECE



of great importance to Greece, because it contained the pass of Thermopylae, through which lay the access to the lands farther to the south. The road here ran between the foot of the mountains and the sea, so that the passage could be defended by a small body of resolute men against a much larger force. At the present day the deposit of the Spercheus has advanced the coast-line so far that the pass no longer exists. To the westward of the pass there is a deep gorge, through which the river Asopus flows, and it was by this route that the Persians under Hydarnes commenced their ascent to the mountains, which resulted in their taking Leonidas and his followers in the rear. Directly to the south of Malis, but on the opposite side of the range of Oeta, about the head-waters of the Cephissus, was the little territory of **Doris**, which at one time was the seat of the Dorian race. An important pass led through it from Amphissa near the head of the Crisaean gulf to Thermopylae. At an early period the whole of the country between the Corinthian and Maliac gulfs was inhabited by the Locrian race, but they were broken up at the time of the southward migration of the Boeotians, when that people was expelled from Thessaly by the Thessalians. After that period we find the **Epicnemidian Locrians** occupying the heights of Mount Cnemis, the easterly continuation of Oeta, and beyond them again, facing Euboea, the **Opuntian Locrians**. Between the two a strip of Phocian territory intervened, with a port at Daphnus. The other portion of the Locrian tribe was the **Locri Ozolae**, who occupied the land that bordered on the Corinthian and Crisaean gulfs to the south-east of Aetolia. Within their territory lay the important town of Naupactus, which owing to its strong position on the coast commanded the approach to the Corinthian gulf.

II. Between the countries which have just been named and Boeotia lay the land of **Phocis**. It was naturally divided into two parts, the upper valley of the Cephissus and the vast mass of Parnassus. The former of these was important because it was traversed by the route which led from Thermopylae into southern Greece; this was commanded by the city of Elatea, and the position of that place explains the consternation which was felt at Athens on the announcement of its capture by Philip, as described by Demosthenes in the *De Corona*. Parnassus was separated from the Corinthian gulf by the chain of Mount Cirphis, and between the two ran the valley of the Pleistus, which led to the Triodos, or meeting of the three roads which there converged from Delphi, Daulis and Thebes. In a steep position on the flank of Parnassus, overlooking the Pleistus at a height of 1500 feet above the sea, stood **Delphi**, the grandeur of the surroundings of which city increased the awe which was inspired by the oracle. Behind it are two converging lines of precipices, culminating in two summits, which are called by the poets the 'twin peaks of Parnassus'; and at the angle which they form rises the spring of Castalia, the stream from which descends to the Pleistus. At the back of

these precipices, in an upland region, lies the grotto which was called the Corycian cave, and far above this again is the true summit of the mountain. Delphi was regarded as the most central point in Greece, and thus, as Greece was considered to occupy a position half-way between the eastern and western extremities of the world, it received the name of the 'navel of the earth.' Between it and the head of the Crisean gulf the Sacred Plain was interposed, at the head of which the guardian city of Crisa was built on a buttress of Parnassus, while the port of Cirrha was situated on the neighbouring coast.

12. **Boeotia** was singularly favoured in respect of its position, for it commanded the traffic between Phocis and Attica, and its coasts, which bordered on three seas, afforded great opportunities for the development of commerce—on the one hand towards the Corinthian gulf, from whence there was communication with Italy and Sicily, on the other towards the Euboic sea, the two bays of which, to the north and south of the Euripus, looked, the one in the direction of Macedonia and the Hellespont, and the other in that of Cyprus and Egypt. But these advantages were almost neutralised by the dull and heavy climate, which imparted a phlegmatic element to the character of the population. The entire area is naturally divided into a northern and a southern basin; the former of these, of which Orchomenus was the chief city, was the centre of supremacy during the heroic age, while the latter, which was presided over by Thebes, rose to importance in the subsequent period. The northern basin was completely surrounded by mountains; and as it received the waters of the Cephissus and other rivers, and afforded no outlet for them except underground passages which were easily blocked, the greater part of its surface was covered by the Copaic lake. At the present day this piece of water no longer exists, having been completely drained by a system of artificial canals and emissaries. The greatness of the resources of this region is shown by the names of the powerful cities which it contained—Orchomenus, Chaeronea, Lebadea, Coronea and Haliartus. The battle-field of Chaeronea lay in front of the city of that name, on the right bank of the Cephissus. The southern basin was for the most part drained by the Asopus, which flowed towards the Euboic sea from the neighbourhood of Plataea. That city stood on a northern spur of Cithaeron, and from it also a brook called Oëroë descended to the Corinthian gulf; the watershed between this stream and the Asopus was the scene of the battle of Plataea. To the northward of it lay Thebes in a valley of its own, into which the hill on which it was built projects, with the streams of Ismenus and Dirce flowing on either side of it. To the westward of Thebes stood the towns of Thespieae and Leuctra, and on this side of Boeotia also was Mount Helicon, the abode of the Muses, in the upper parts of which were the two famous fountains of Aganippe and Hippocrene. Near the course of the Asopus lay the towns of Tanagra and Oenophyta, and at no great distance from its mouth was the temple and sacred enclosure of Delium. The

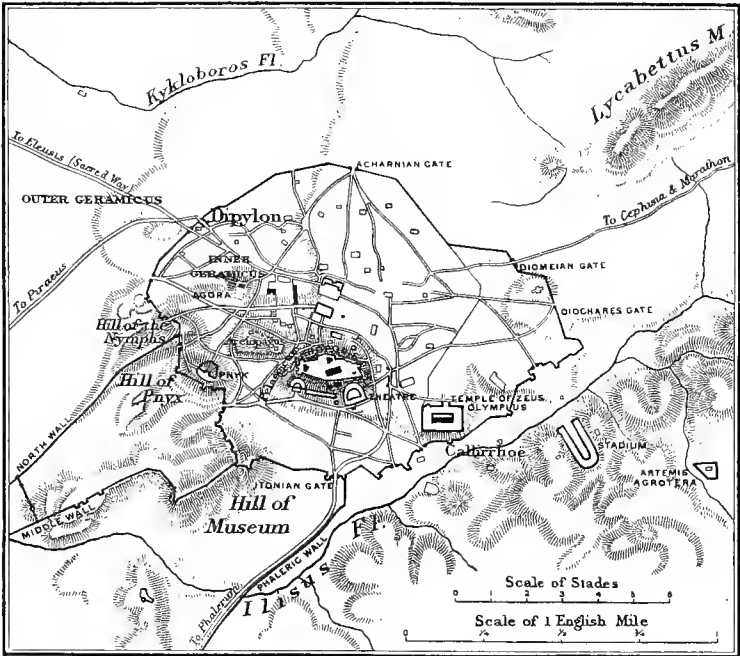
amount of level ground which was comprised in Boeotia caused it to be the scene of numerous engagements. Several of these are associated with the names of Chaeronea and Coronea, while others are called up by those of Oenophyta, Delium and Leuctra.

13. The neighbouring island of **Euboea** was of great importance to Boeotia, both because it formed a breakwater to shelter its coast, and still more after it was joined to the mainland by a bridge in 411 B.C., because by that means it almost became part of that country. Previously to that date it had for a long time been one of the most valuable possessions of Athens, which city it had supplied with timber and corn, and with pasture for flocks. The Euripus, which was spanned by this bridge, was a narrow channel, somewhat more than 200 feet across, and was commanded by the city of Chalcis on the side towards the island. The changes of the tide in this strait, which occur several times in the day at irregular intervals, have been an object of wonder from the earliest times to the present day. On the Boeotian shore at no great distance off stood Aulis, the port from which the fleet of the Greeks sailed to Troy; and to the southward of Chalcis lay its rival, the city of Eretria. Euboea is intersected throughout its whole length by a range of steep mountains, which attains its greatest elevation in Mount Dirphys in the centre of the island. At its northern extremity it was separated from the Thessalian coast by the strait of Artemisium, while towards the south it ended in the two promontories of Caphareus and Geraestus. These were greatly dreaded by mariners on account of their storms, which was also the case with the rocks of Coela on the eastern side, where a portion of Xerxes' fleet was wrecked.

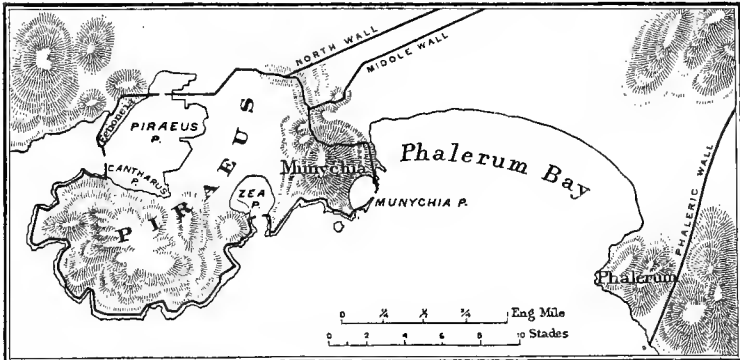
14. The triangular piece of ground which projected southward from Boeotia into the sea was the land of **Attica**. The two countries were divided from one another by the massive chain of Cithaeron and Parnes, which formed a continuous line from sea to sea. Three passes led over these mountains: in the centre, near their point of junction, that of Phyle, which was occupied by Thrasybulus at the time of the Thirty Tyrants; farther to the west that of Dryoscephalae, which crossed Cithaeron from Thebes by way of Plataea to Eleusis; and to the eastward that which led from Oropus over Parnes to Athens by Decelea, the usual route of the invading Lacedaemonians during the Peloponnesian war. The spurs which descend southwards from this chain divide Attica into a succession of plains from west to east. The first of these plains was the territory of **Megaris**, which originally, like the rest of the country, belonged to the Ionians, but passed into the hands of the Dorians when they invaded the land at an early period and established themselves there. The city of Megara was built about a mile from the Saronic gulf, on which it had the port of Nisaea, while it communicated with the gulf of Corinth by the port of Pagae. Its importance arose from its commanding the passes which led into the Peloponnese, one of which crosses Geranea, while the other skirts the foot

of that mountain, where the precipices of the Scironian rocks overhang the sea. To the eastward of Megaris, and separated from it by the ridge of Kerata, lay the plain of Eleusis, and opposite to this, on the farther side of a bay, stretched the island of Salamis. It was in the strait by which this bay is entered on its south-eastern side that the battle of Salamis took place. Between the plains of Eleusis and Athens the line of Aegaleos intervened, and it was in a depression in the ridge of this, between the two cities, that the Sacred Way passed, which formed the route of the torchlight processions in connexion with the Eleusinian mysteries. The plain of Athens was watered by two streams, the Ilissus and the Cephissus. The former of these flowed close to Athens, on its eastern side; but the Cephissus, the course of which lay nearer to Aegaleos, was a much more important stream, and its waters, which were drawn off into numerous channels for purposes of irrigation, fertilised the groves of Colonus and the gardens of the Academy. Mount Hymettus, which bounded this plain on the east, terminated in the sea at the promontory of Zoster, but at its other extremity it does not join the mountains towards the north, for it is separated by an interval of two miles from the base of Pentelicus. At this point is the entrance to the Mesogaea, an undulating plain, which was so called because it nowhere touches the sea, being separated from it by the hills, which start from Pentelicus and Hymettus respectively, and converge at Sunium. The strip of fertile land, which followed the coast from Zoster to Sunium, bore the name of the Paralia. The last of the plains of Attica, which remains to be mentioned, was that of Marathon, in the north-east of the country; this was enclosed on three sides by Parnes and Pentelicus, and on the fourth by the Euboic sea. In the same direction, but on the northern side of Parnes, lay the district of Oropus; geographically, this belonged rather to the territory of Boeotia, but the Athenians carefully maintained their hold upon it, because it facilitated their communication with Euboea. In consequence of this Oropus was always a bone of contention between the two states. The history of Athens, both external and internal, was materially affected by the nature of Attica. Its light soil, which, though it favoured the growth of the olive, was generally unremunerative to the cultivator, caused the inhabitants to turn their thoughts towards the sea; and the length of the seaboard, with the facilities which it afforded for communication with foreign lands, led them in the same direction. Again, in the features of the country which we have traced we discover the origin and character of the three political parties of the early period. The Pedieis, who inhabited the plains, were the great landholders, whose object was to retain the chief power in their own hands; the Diacrii or Hyperacrii, who occupied the sides of Pentelicus and Parnes and the ground in their neighbourhood, were poor mountaineers, who had little to lose, and were consequently disposed for political change; while the Parali, or dwellers on the sea-coast, represented mercantile interests, and by their moderate views held the balance between the others.

ATHENS



HARBOURS OF ATHENS



15. The site of **Athens** is on the eastern side of the Athenian plain, about four miles from the sea, where a number of craggy hills rise from the level ground. Conspicuous among these is the altar-shaped rock, on which stood the Acropolis, forming an irregular oval, about 1000 feet in length from east to west, and 500 feet in breadth, while its level summit was 350 feet above the plain: its sides are everywhere precipitous, except towards the west, where the ascent is somewhat more gradual. On this hill, and partly also on the lower ground to the southward of it, the original city was built; after a time this was gradually extended towards the north, but the line of the city walls was hardly more than half a mile distant in that direction. After the Persian wars the Acropolis ceased to be inhabited, and was reserved to be a fortress and a sanctuary, and was adorned with splendid buildings and works of art. The most famous among these were the Propylaea, through which it was entered at its western end, and within this, on the left hand of the spectator, the colossal bronze statue of Athena Promachos, and on the right the Parthenon, opposite to which, on the northern side of the area, stood the Erechtheum. To the westward of the Acropolis, at a lower elevation, and separated from it by a deep depression, in the neighbourhood of which was the space of ground called the Pelasgicum, rose the hill of the Areopagus. Under the north-eastern angle of this lay the famous cave of the Eumenides, with a fountain and temple; while towards the south-east a stone staircase led to the summit, where a rock-hewn bench, running round three sides of a quadrangle, like a triclinium, formed the place of session of the great court of justice. Again, on the western side of the Areopagus, and following a direction from north to south, ran a line of hills—the Hill of the Nymphs, the Hill of the Pnyx, and the Hill of the Museum. The place of assembly on the Pnyx was an open space of ground, gently sloping towards the north-east, the lower part of which was supported by an ancient wall of massive construction: the upper part was skirted by a steep face of cliff, from the middle of which projected a solid rectangular block, forming the Bema, or platform, from which the orator spoke. The Dionysiac theatre lay near the south-east angle of the Acropolis hill, in the rocks at the foot of which its seats were partly excavated. Between it and the Ilissus stood the great temple of Olympian Zeus, and just below this, close to the bed of the stream, was the fountain of Callirrhoë. The Agora or market-place of Athens occupied an area to the northward of the Areopagus, including part of the quarter of the inner Cerameicus, which extended as far as the Dipylum, or north-western gate of the city. Mount Lycabettus, which lay outside the city walls towards the north-east, though it is by far the most conspicuous summit in the neighbourhood of Athens, is rarely mentioned by Greek authors.

16. The **Harbours of Athens** lay in the neighbourhood of the Hill of Munychia, which projected into the sea from the coast to the south-west of Athens. From its eastern side stretched

Athens.

Peiraeus, etc.

away the open roadstead of Phalerum, and under the hill itself, facing in the same direction, were the small but safe inlets of Munychia and Zea. To the west lay the Peiraeus, an almost ideal port, for it is safe, deep and spacious, and its entrance is defended by a tongue of land called Eetioneia, which projects to meet a corresponding prominence of the Peiraic peninsula. This basin was again divided into two parts—the great harbour, which was devoted to merchant vessels, and that called Cantharus, on the southern side, which was reserved for ships of war. The latter haven, and that of Zea on the opposite side of the peninsula, approached so near to one another as almost to divide that piece of ground in two. The Long Walls, which connected these harbours with Athens, were originally two, one of which ran from the city to the Peiraeus, the other to the eastern extremity of the bay of Phalerum; the third, which was added by the advice of Pericles, was intermediate between these, and joined the eastern part of the fortifications of Peiraeus to Athens, by which means the communication between the two places was rendered more secure.

17. The Peloponnese is compared by Strabo to the leaf of the plane-tree, which it resembles in its broad surface and the variety of its outline. The deep indentations of the coast which are characteristic of Greece are here especially conspicuous.

The Peloponnese.

The mountains which intersect it in several directions naturally subdivided it into a number of states, but at the same time its compactness of form contributed an element of unity, which caused those states to act in concert with one another when the occasion required it, and thus facilitated the creation of the hegemony which was exercised by Sparta. It may be regarded as the acropolis of Greece, being the inner fortress on which the inhabitants of that country could fall back, when its outworks had been taken by an invader. Its mountain system is independent of that of central Greece. In the northern part of the country a massive chain runs from east to west, separating Achaia from Arcadia, and reaches a great elevation in three summits—Cyllene to the east, Aroanius in the centre, and Erymanthus to the west. From this the other principal chains diverge at right angles—on the eastern side of Arcadia the line of Artemisium and Parthenium, which is continued as Parnon in the direction of Cape Malea; in the centre of the country, first Maenalus, and afterwards Taygetus, the loftiest of all, which separates Laconia from Messenia; while to the west the ranges are at first less definitely marked, but as they advance southward attain a considerable height in Lycaeum, and are continued by Mounts Ithome and Eva towards the promontory of Acritas. The mountains of Argolis start from Cyllene, and follow a south-eastern course through that country.

18. The Isthmus of Corinth, by which the Peloponnese was joined to the rest of Greece, is about three and a half miles wide in its narrowest part, and nowhere rises to any great height above the sea-level. Its importance to the country may best be seen by comparing the correspond-

ing feature of the Italian peninsula. There the limb in which the organism terminates, Sicily, is severed from it by the Straits of Messina, and consequently that island never stood in the same intimate relation to Italy in which the 'Island of Pelops' stood to Greece. Immediately within the Isthmus the steep Oneian mountains barred farther progress, and the stronghold of **Corinth**, which stood at the western extremity of these, served as a warder to guard the passage into the interior. That city occupied one of the finest positions in Greece, for its lofty fortress, the Acro-corinth, was almost impregnable, and contained an inexhaustible supply of water in the fountain of Peirene; and it possessed two harbours, that of Lechaëum on the Corinthian gulf, and that of Cenchræe on the Saronic. It was enabled to communicate by sea for purposes of trade both with the far east and the far west; and this intercourse was facilitated by the Diolcos, a sort of roadway, by which vessels used to be drawn across the isthmus. At the same time it both commanded the lines of traffic between northern and southern Greece, and formed the most convenient station for the export of goods from the interior to foreign countries. The part which Corinth played in the politics of Greece was affected by these commercial interests, for they caused her on the whole to be in favour of the maintenance of peace, and to endeavour to preserve the balance of power between the other states.

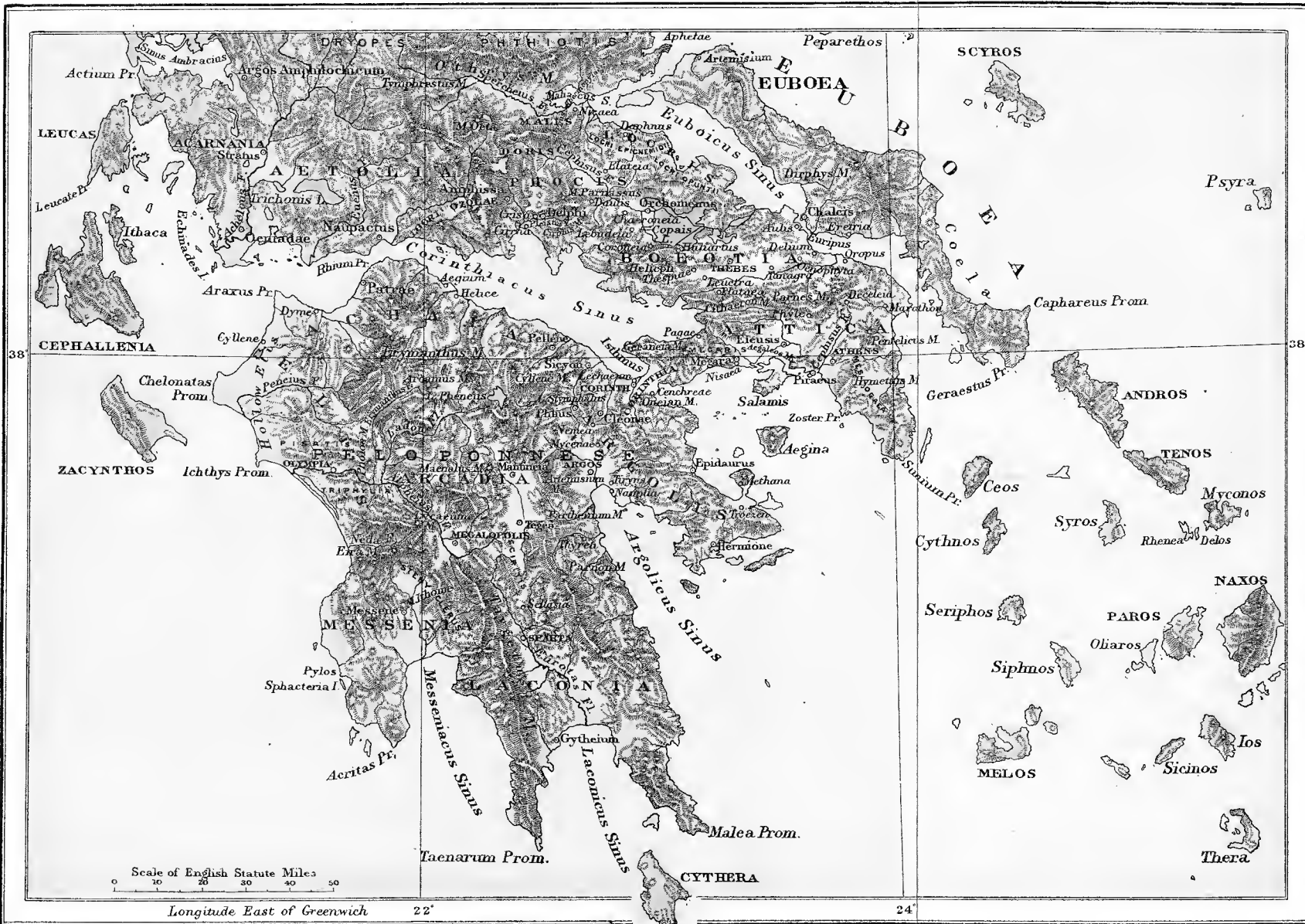
19. About nine miles to the north-westward of Corinth, and two from the Corinthian gulf, stood the city of Sicyon, a place of importance in the early history of Greece, and for a long period a home of the fine arts. Beyond it commenced the district of **Achaia**, which extended as far as the promontory of Araxus, on the confines of Elis. It was a narrow strip of territory, being hemmed in between the mountains of northern Arcadia and the sea, and was for the most part composed of sloping fertile ground. Hence in Homer it is called Aegialus, or the coast-land. Its shores, however, are singularly uniform and destitute of harbours, in which respect they are strongly contrasted with those on the northern side of the Corinthian gulf, which are broken into numerous bays. The entire area is divided up into a number of valleys and small plains by gorges through which the torrents descend from the mountains; and owing to this conformation of the land the most natural political system by which the inhabitants could be held together was a federal union. The early confederation which was thus formed was afterwards developed into the famous combination which was called the Achaean League. The principal cities of Achaia were Pellene, Helice and Aegium on the gulf of Corinth, and Patrae (Patras) and Dyme beyond the straits at Rhium on the outer sea.

20. The north-west corner of the Peloponnese was occupied by **Elis**, a land not easily defensible, for it was largely composed of level ground bordering on the sea. On the edge of this lie two promontories, which probably were rocky islands before they were joined to the mainland

by alluvial soil—Chelonatas, the westernmost point of the Peloponnese, and Ichthys. It naturally fell into three divisions—to the north Hollow Elis, in the centre Pisatis, and to the south Triphylia. The first of these, Hollow Elis, comprised the western slopes of Erymanthus, and the valley and plains of the Peneus which flows from them. On its coast, at some distance northward of Chelonatas, was the port of Cyllene. Pisatis, which was separated from this by the spurs of Mount Pholoë, represented the lower valley of the Alpheus and its environs. That river rises at no great distance from the sources of the Eurotas, and after passing through western Arcadia, and receiving the waters of the Ladon and the Erymanthus, which flow from the northern part of that country, descends through an open valley to Olympia. That place, which from the Panhellenic character of the games which were celebrated there was almost as great a uniting force among the Greeks as the Delphic oracle, was situated on the northern side of the valley, on level ground which intervenes between the river and a conspicuous conical hill, Mount Cronius; while towards the west its area was bounded by the stream of the Cladeus, which here enters the Alpheus at right angles. The Altis, or sacred enclosure, contained the famous temple of Zeus with the chryselephantine statue of the god by Pheidias, and among other edifices the Heraeum, in which during the modern excavations of the place Praxiteles' statue of Hermes was found. The stadium and hippodrome lay without the Altis, on its eastern side. The third division of Elis, Triphylia, which owing to its position was easily dis severed from the rest of the country, was a narrow strip of coast-land between the mountains and the sea, extending as far south as the confines of Messenia, on which side the boundary was formed by the river Neda.

21. Messenia was a favoured country on account of its equally warm climate and fertile soil; but these very advantages were the cause of its misfortunes, because they acted as a temptation to its less favoured neighbours, and tended to enervate its inhabitants, so that they lost their power of resistance. It was divided into an upper and a lower plain, which were bordered by two ranges of mountains, which take their origin in Mount Lycaeum, and run, on the one side to Cape Acritas, on the other towards the chain of Taygetus. The upper plain was that of Stenyclerus, at the head of which stands the peak of Eira, the scene of the final struggle of the Messenian people, while at its exit rises Ithome, where the protracted defence under Aristodemus took place. This summit overlooks the lower plain, which extends to a greater width, and reaches to the head of the Messenian gulf. The city of Messene was founded by Epameinondas on the western side of Ithome, with the highest point of that mountain for its acropolis. The principal harbour in Messenia was that of Pylos (Navarino), a semicircular inlet, in front of which lay the long island of Sphacteria. The northern extremity of this island was separated by a narrow strait from the headland of Pylos or

CENTRAL GREECE AND THE PELOPONNESE



Coryphasium, which was occupied by the Athenians during the Peloponnesian war.

22. **Laconia** was separated from Messenia by the lofty range of Taygetus, while on its eastern side, towards the Aegean, ran the lower, but still elevated, chain of Parnon. In a deep depression between the two lay the valley-plain of Sparta, the 'hollow Lacedaemon' of the Homeric poems, which was eighteen miles in length by four or five in breadth; it was watered by the stream of the Eurotas, which rises on the confines of Arcadia, and ultimately finds its way into the Laconian gulf, after passing through a narrow defile called the Aulon. The site of Sparta, which was on the eastern side of the plain, and on the right bank of the Eurotas, in some respects resembled that of Rome, for it was built on a group of low hills by the side of a river. The strength of its position, owing to its seclusion and the steep mountains which surround it, explain how it came to pass that Sparta had no need of fortifications. The same features contributed towards the concentration of power in the hands of a limited number of citizens, and thus rendered it suitable for the maintenance of an aristocratic commonwealth. The plain and the best land in its neighbourhood were cultivated by the Helots, who occupied the position of serfs, while the mountainous and less productive parts were in the hands of the Perioeci, who, though free, had no share in the government. Of the passes by which the country could be entered, one led from western Arcadia by the upper valley of the Eurotas; to the eastward of this another, starting from Tegea, crossed the upland region of the Sciritis, and was afterwards joined by a third, which came from Argos through the border district of Thyrea. The two latter met at Sellasia, the scene of the great defeat of the Spartans by Antigonos Doseon, and the valley which was thus formed descended on Sparta. Gytheum, the port of Sparta, was situated near the head of the Laconian gulf.

23. In the centre of the Peloponnese lay **Arcadia**, the only portion of the peninsula which did not anywhere touch the sea. It was in every respect a secluded land, being environed on all sides by mountains, and greatly elevated above the surrounding country, so that the plain of Mantinea is more than 2,000 feet above the sea. Its eastern and western regions, which are separated from one another by Maenalus and other mountains in the same range, in many ways differ from one another in their characteristic features. The western part, which is drained by the Alpheus and its tributaries, and had Megalopolis for its chief city, is an irregular hilly plateau; while that towards the east is occupied by a number of closed valleys, deeply sunk among the mountains, which have no outlet for their waters except by means of underground passages. Thus in some of them, such as those of Stymphalus and Pheneus in the north of the country, considerable lakes are formed; while others, like the great double plain of Mantinea and Tegea, are filled by alluvial soil. The last-named area, in consequence of its level character

and central position, became the great battlefield of southern Greece, so that not less than four great engagements were fought in it. From this neighbourhood three passes led to Argos: one from Tegea through Mount Parthenium; another, the most direct, called Prinos, from Mantinea through Mount Artemisium; and a third, called Climax, farther to the north. It was partly a result of the confined situation of Arcadia, and of the consequent difficulty of providing for the surplus population, that it supplied the Hellenic world with mercenary soldiers. Its inhabitants, both in their geographical position and their occupation, were the Swiss of antiquity.

24. The remaining province of the Peloponnese, **Argolis**, bore a strong resemblance to Attica in its shape and position, being a peninsula which started from a broad base and projected south-eastwards into the Aegean. In consequence of its long shore-line it was sometimes called the Argolic Acte. Its importance is shewn by the names of the cities that are found in it. On the northern coast lay Epidaurus, with its famous sanctuary of Asclepius, and Troezen, in front of which rose the strange volcanic peninsula of Methana; between this and the Peiraeus, in the middle of the Saronic gulf, was the island of Aegina, the position of which caused it to be regarded with jealousy by Athens, so that Pericles called it 'the eye-sore of the Peiraeus.' On the southern coast was Hermione. In the interior, towards the north-west, in an upland plain, were the sanctuary and temple of Zeus at Nemea, which were the scene of the Nemean games, and in its neighbourhood stood the cities of Phlius and Cleonae. Through this region led the pass between Corinth and Argos, the narrowest part of which was known as the Tretos. Between it and the head of the Argolic gulf, hemmed in on three sides by steep mountains, extended the Argive plain, which in the early period of Greek history was the chief seat of the civilization of the country. On the sea-coast was Nauplia, the chief seaport for the Argolid, at first an independent state, and a member of the amphictyony of Calauria. About the time of the Second Messenian War it became subject to Argos. A little distance inland, on a crust of rock which rises out of the level ground, stood Tiryns, a fortified citadel, the massive walls of which still testify to its strength. These walls, which are from twenty-five to fifty feet thick, are traversed by galleries or passages. The oblong area which the city occupied is divided into two enclosures of about equal size—an upper one towards the south, and a lower one towards the north. The main entrance, which is on the eastern side, has a great gateway flanked by towers, and also an inner gateway. On the western side there is a postern gate. The surface of the southern enclosure is covered by the remains of a prehistoric palace, in which may be traced an extensive court with an altar, and two separate sets of apartments (see Ch. VII. 8, **House and Furniture**). On the western side of the plain lay Argos, with its imposing citadel of Larissa, and at its head Mycenae was placed, the wealth and primitive grandeur of which capital has also been attested

by the investigations of Dr Schliemann. Before his time the principal gate, or Gate of Lions, as it was called from the figures of two lions sculptured in low relief by which it is surmounted, was a familiar object to travellers; as was also the subterranean building, shaped like a bee-hive, which was known as the Treasury of Atreus. These and other objects in their neighbourhood he cleared out; but his most remarkable discovery was that of five prehistoric tombs, immediately within the Gate of Lions, which he found by digging at a depth of from twenty-five to thirty-three feet beneath the present level of the soil. Within these were contained the remains of human bodies, some of which had their faces covered by massive golden masks, and their breasts with golden breastplates; and along with them lay an immense quantity of treasures, which were for the most part of gold, elaborately wrought in a highly primitive style of art. A sixth tomb, similar in character to these, was subsequently excavated.

25. Of the islands on the western side of Greece, the northernmost was Corcyra (Corfu), which on account of its proximity to the heel of Italy formed a convenient point from which that The Islands. country might be reached. Owing to its great fertility it has often been identified, though without sufficient reason, with the Homeric Phaeacia. Its capital city was situated in the middle of the eastern coast, facing the mainland of Epeirus. To the southward of the mouth of the Ambracian gulf lay Leucas or Leucadia (Santa Maura). This island was originally a peninsula, having been joined to the coast of Acarnania by a sandy isthmus at its northern extremity, which was pierced by a canal constructed by the earliest Greek settlers. The headland of Leucate, which formed its southern extremity, was famous as the scene of the Lovers' Leap. Then followed the small island of Ithaca, with its conspicuous summit of Neritos, which was separated by a narrow channel from Cephallenia. Finally, opposite the headland of Chelonatas in Elis, lay Zacynthus (Zante).

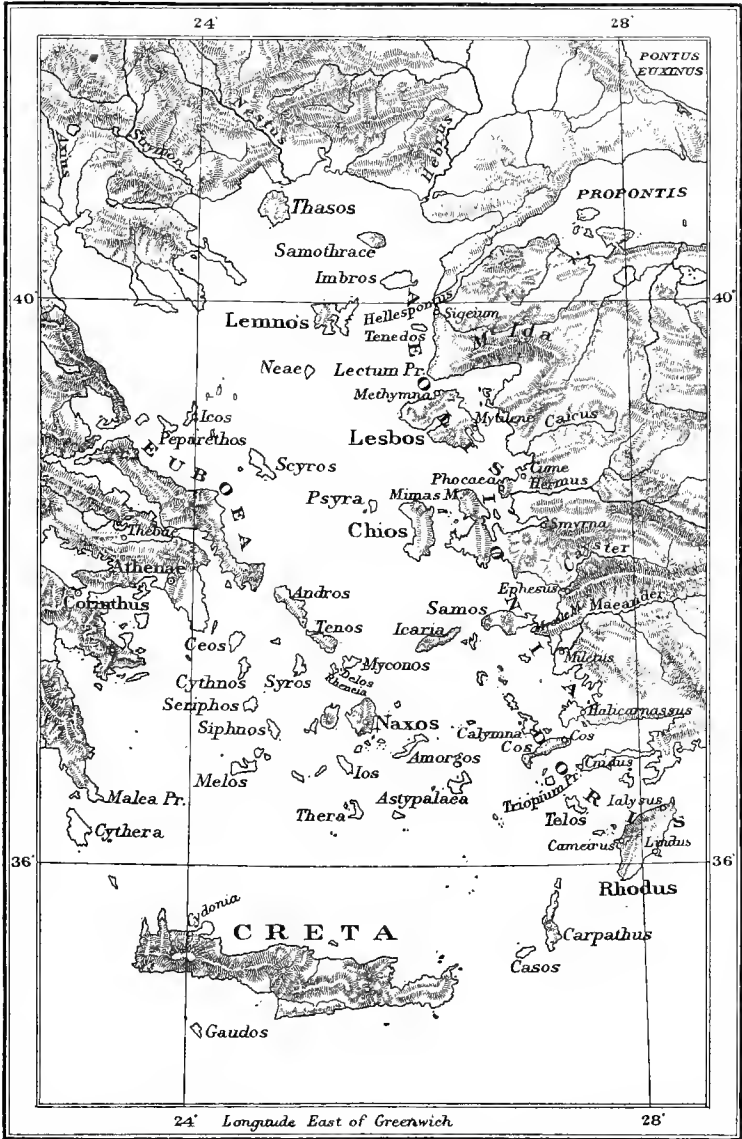
26. The islands to the eastward of Greece—to omit those in the immediate neighbourhood of the coast, which have been already mentioned—were important because they served as stepping-stones to join the lands on either side of the Aegean. At the southern extremity of that sea a link was formed by Crete, which was connected by Cythera with the Peloponnese, and by Casos, Carpathos and Rhodes with Caria. Farther to the north a similar bridge was formed by the Cyclades, which were so called because they formed a circle round the sacred isle of Delos. We have already seen that the northern row of these islands—Andros, Tenos and Myconos—forms a continuation of the mountains of Euboea, while those towards the west—Ceos, Cythnos, Seriphos and Siphnos—stood in the same relation to those of Attica. A link between the extremities of these chains was formed by Paros and Naxos, and to the southward of the whole group lay the volcanic islands of Thera and Melos. Delos itself, which is less than three miles in length, is separated from the sister island of Rheneia by a narrow strait, which forms an excellent harbour. In the

north of the Aegean is another group, consisting of Lemnos and Imbros, off the mouth of the Hellespont, which for a long period were occupied by Athenian colonists; Samothrace, with its sanctuary of the Cabeiri; and Thasos, which was famous for its gold mines. In the interval between the two last-named groups, to the eastward of Euboea, lay Scyros, the island of the great Achilles.

27. The western seaboard of Asia Minor, which from an early period was fringed with Greek colonies, in many respects resembled that of Greece, being distinguished by great variety of outline, and forming innumerable bays and harbours. Its chief headlands were Lectum, to the southward of the Troad, where the range of Mount Ida sinks into the sea; Mimas, a promontory noted for its dangerous storms, which was interposed between the bay of Smyrna and the island of Chios; Mycale, the scene of the famous battle, which lay opposite Samos; and the Triopian promontory, on the extremity of which the town of Cnidus was built. The climate of this region was temperate, and its soil extremely fertile, being watered by four rivers—the Caicus, the Hermus, the Cayster and the Maeander. The Greek colonies here fall into three groups, corresponding to the three chief Hellenic races. Those of the **Aeolian** stock were scattered over the northern portion of the coast, extending from Sigeum, at the mouth of the Hellespont, to Cyme, between the Caicus and the Hermus, and including the island of Lesbos, with its important cities of Mytilene and Methymna. The central portion, which bordered on Lydia, was occupied by the **Ionians**, who formed a confederation of twelve cities, or Dodecapolis, to which a thirteenth, Smyrna, was afterwards added. The chief among these were Phocaea, Ephesus and Miletus. Towards the south lay the **Dorian** colonies—Halicarnassus, Cos and Cnidus, together with the three cities in the island of Rhodes, Lindus, Ialysus, and Cameirus. These at first were combined into a Hexapolis, but after a time this was reduced to a Pentapolis by the exclusion of Halicarnassus. This portion of the coast was fringed by numerous small islands, of which Calymna and Cos were the chief.

28. Beyond the limits of the Aegean the colonies of the Greeks were gradually extended over a very wide area, both to east and west. The **Propontis**, which was the vestibule of the Euxine, was guarded by **Cyzicus**; and at its further end, on either side of the mouth of the Bosphorus, stood Byzantium on the European, and Chalcedon on the Asiatic shore. On the southern coast of the **Euxine** the Milesian colony of Sinope was founded, and farther to the east its daughter city, Trapezus (Trebizond); while on the northern coast the opportunities for trade afforded by the rivers of Scythia encouraged the establishment of others in that inhospitable region, chief among which were Olbia, which commanded the mouths of the Hypanis (Bug) and Borysthenes (Dnieper), and Panticapaeum (Kertch) on the Cimmerian Bosphorus at the entrance of the Palus Maeotis. In the eastern part of the Mediterranean others arose in

AEGEAN SEA & COAST OF ASIA MINOR



Scale of Miles
0 20 40 60 80 100

Camb. Univ. Press

To face p. 20

Cyprus, especially Salamis, on the coast facing Syria, and Paphos at the opposite extremity of the island. On the African coast, where it approaches nearest to the southern extremity of Greece, the Theraeans founded the colony of Cyrene, which in turn became the parent of Barca and other cities. In **Egypt** the Greeks were not permitted to found colonies, but after a while they were established as settlers at Naucratis, which became an important trading station. After the foundation of Alexandria, that great metropolis was the chief centre of Hellenic civilisation in the East.

29. On the side of Europe, the rich island of **Sicily** afforded an inviting field for colonisation. Though a considerable portion of its surface was mountainous, and the eruptions of Etna possessed an element of destructiveness which found no parallel in Greece, yet for the most part it was singularly fertile, and was specially suited to the growth of corn. Of the two races by whom it was inhabited, the Sicanians, who occupied the western regions, and according to Thucydides were of Iberian extraction, were a hardy and warlike people; but the Sicels, who dwelt in the eastern portion, were more akin to the Greeks in race, and readily yielded themselves to Greek influences. The eastern coast, which looked in the direction of Greece, was naturally the first to attract settlers from that land. Here Naxos was founded at the foot of Aetna by the Chalcidians, and Megara Hyblaea by the Megarians; but the most important was the Corinthian colony of Syracuse, which rose to great prosperity, chiefly in consequence of its magnificent harbour. This was formed by an inlet of the sea, which intervened between the two headlands of Achradina and Plemmyrium, and was guarded on its outer side by the island of Ortygia. The site of this island was admirably suited for a maritime city, and the rocky heights which stretched to the northward of it provided a defensible position when its area required to be extended. The river Anapus, which flowed into the innermost part of the harbour, furnished a means of communication with the interior of the country. The harbour itself became famous in history as the scene of the sea-fight between the Athenians and Syracusans, which determined the momentous question whether the Athenian power was to become predominant in Sicily. In the neighbouring districts the towns of Catana and Leontini were founded by Naxos, and those of Acrae and Casmenae by Syracuse; but some time elapsed before the tide of emigration reached the southern coast. This was due partly to the promontory of Pachynus, which had a forbidding character in the eyes of Greek sailors, like that which was presented by Malea in the south of Greece; and partly to the presence of the Phoenicians, who occupied the most defensible positions. At last, in the course of years, Camarina, Gela, Acragas and Selinus arose, among which the most important was Acragas or Agrigentum, the conspicuous remains of the temples of which city are still to be seen, crowning the elevated table of rock on which it was built. The Phoenicians now withdrew farther towards the west, but it was long before they were finally expelled from their stronghold on Mount Eryx,

and from the important station of Panormus (Palermo). The only considerable settlement that was established on the northern coast of the island was Himera.

30. In **southern Italy** the Greek colonies multiplied so rapidly, that at last that district obtained the name of Magna Graecia. On that part of its shore which intervenes between Greece and Sicily, the Achaeans of the Peloponnese planted Sybaris and Croton, cities which were notorious from their feuds, which resulted at last in the destruction of Sybaris. Locri Epizephyrii also was founded on this coast by the Locrians; while in the innermost angle of the deep bay which lies between the heel and the toe of Italy stood Tarentum, a colony from Sparta. This place was famed for its temperate climate, for the suitableness of the soil in its neighbourhood for the growth of the olive, and for the fisheries of its extensive inner harbour, which was separated from the outer sea by the peninsula on which the city was built. The passage of the Fretum Siculum (Straits of Messina), by which the Tyrrhenian sea was entered, was guarded by Rhegium on the Italian shore and Messana on the Sicilian: and the coast to the northward of this was studded by a succession of towns, the remotest of which was Cumae. The fame of that place, which was the earliest in date of all these settlements, was ultimately eclipsed by that of its offspring, Neapolis (Naples), which arose in the neighbouring bay. Finally, the Phocaeans of Ionia made the farthest advance of all, and penetrated to the coast of Gaul, where they founded Massilia (Marseilles). The last-named place may be regarded as a typical instance of the positions which the Greeks selected by preference for their colonies; for the conditions which they desired were a safe harbour in the recesses of a bay, with a steep height close to it which might serve for an acropolis; and in the neighbourhood of this a moderate extent of cultivable land, backed by an extensive area in the interior of the country, from the inhabitants of which articles for export might be obtained. In this respect the colonists enjoyed greater advantages than the occupants of the parent states, for whereas the latter were bound to their original settlements whether they were advantageous or otherwise, the emigrants had an open field before them, from which to choose such sites as were best fitted for agricultural or mercantile purposes. In consequence of this it was in their power to accumulate wealth more rapidly; and the leisure which this wealth procured caused the fine arts to be more early developed among them than in the mother country—a fact, to which both their public buildings and their coins bear witness—and also gave birth to independent schools of philosophy, such as the Eleatic and the Pythagorean.

Leake, *Travels in Northern Greece*, 4 vols.; *Travels in the Morea*, 3 vols.;

Bibliography. *Peloponnesiaca*; E. Curtius, *Peloponnesos*, 2 vols.; *Stadtgeschichte von Athen*; Wordsworth, *Greece, Pictorial, Descriptive, and Historical*; new ed., 1882; Bursian, *Geographie von Griechenland*; Lolling, *Hellenische Landeskunde und Topographie*; Struck, *Zur Landeskunde von Griechenland*; Frazer, *Pausanias's Description of Greece*, 6 vols.

THE GREEK COLONIES



I. 2. ETHNOLOGY.

31. THE ethnology of Greece is one of the most complicated and most hotly disputed of all classical problems. The accounts given by the Greeks themselves are confused and contradictory. Difficulty of problem. Thucydides (I. 8), in one of the few instances in which an ancient author attempts to use archaeological methods, in determining the original inhabitants of the Cyclades arrives at a conclusion which all modern critics reject. Formerly it was the fashion to dismiss all accounts of Greece before the Dorian Invasion as legendary and fictitious. In more recent times archaeology and especially the discoveries of Schliemann and Evans have provided fresh material for controversy. Every archaeological discovery and every new piece of literary criticism, especially that on the Homeric question, has given a fresh turn to the ever shifting kaleidoscope of opinion on Greek ethnology.

32. The area in which the Greek race developed is not large; it comprises the Greek peninsula south of Thessalonica and the Acroceraunian promontory, to which must be added the adjacent islands in the Ionian and Aegæan seas and Crete. Area of Greek civilization. This territory looks mainly to the south-east. This is the more fertile and the less rugged side, is better provided with harbours, and enjoys a warmer and drier climate than the north-west. The natural tendency of the Greeks in historical times was always eastwards, and this seems to have been noted by Hippocrates. He says (*de Aere*, 3 ff.) that cities which face east have the best; those that face west have the worst climate. Bearing this division of Greece in mind we may separate it into the following districts. To the south-east there are Crete, the Aegæan islands, and the plains and gulfs of Messenia, Laconia, Argolis, and Attica. To the north-west lie the north-western part of the Peloponnese, the Ionian islands, Aetolia and Epeirus. The north-eastern portion of Greece (Thessaly, Phocis and Boeotia) at first occupied an intermediate position, but as civilization spread northwards, naturally became assimilated to the south-eastern group owing to its gulfs and plains.

33. According to the archaeological evidence (§§ 283 ff.; cf. also throughout the chronological table § 115) civilization began to develop in this area when bronze was first used instead of polished stone for the making of cutting tools. Minoan and Mycenaean civilization. It must not, however, be assumed that the change from the Polished Stone (Neolithic) Age to the Bronze Age occurred simultaneously in all the divisions of the Greek area just mentioned. Bronze was in use in Crete and the neighbouring districts about 3000 B.C., while the northern regions do not seem to have adopted it till a much later date. Civilization first developed in Crete in the Early Minoan Period between 3400 and

2200 B.C., and at the same time a parallel, though not so vigorous a development, was taking place in the Cyclades, and perhaps also in the south-eastern districts of the mainland. During the Middle Minoan Period (2200—1600 B.C.) the Cretan civilization became dominant in the islands, and towards the end of the period began to colonize portions of the mainland, especially the Argolid. About the same time also the culture of the south-eastern part of the mainland seems to have spread northwards and brought under its influence Boeotia and all east-central Greece as far as Mount Othrys. In the first two phases of the next period (Late Minoan I. and II.) civilization radiated widely from two foci, Crete and the mainland. The culture of these two regions progressed on parallel, but separate lines. The 'Minoan' civilization from Crete influenced the islands and coasts of the Levant, while the 'Mycenaean' spread over continental Greece. In the last phase of this period (Late Minoan III.), especially towards its end, occurred the widest diffusion of this Minoan-Mycenaean culture: it extended from Spain in the west to Philistia in the east. But at the beginning of this last phase, about 1400 B.C., the main centre shifted from Crete to the mainland on the destruction of the great Cretan palaces. The ruin of the Cretan supremacy was perhaps caused by the people of the mainland turning against those who had taught them the arts of peace and war. About 1200 B.C., when the use of iron began to supersede that of bronze, a general and fairly sudden degeneration in culture took place, although signs of an artistic decline are evident as early as 1400 B.C. The Early Iron Age culminated about 900 B.C., and the period of transition from bronze to iron between 1200 B.C. and this date is both in Greek tradition and in archaeological evidence marked by changes in inhabited sites and by movements of population. To this period belong the Trojan War, the Dorian Invasion and the Ionian Migration. Archaeology shows that during this time old inhabited sites were deserted and new cities were founded which continued through the classical age. Gradually out of this dark age historical Greece emerged and it may be said to have begun with the First Olympiad (776 B.C.). By this time Greece was occupied by a people called by themselves Hellenes, by oriental races Yavana, and by the Romans at a later period Graeci. To define the origins of this race we must discover what peoples inhabited the country in the Bronze Age and trace the migrations of the period that succeeded.

34. Anthropological opinion about early man in Europe and the

home of the Indo-European stock is in such a state of flux
Sergi's theory. that any arguments based on it, are insecure, especially since
 craniological and similar data from Greece are as yet scanty. It was once
 believed that the neolithic men of Europe were a dark, long-headed (dolichocephalic) race who were overrun by a fair, short-headed (brachycephalic), Alpine race invading central Europe from Asia. Both of these were later subdued by the Indo-European races, who coming from Asia, the home of Sanskrit, imposed their languages on the peoples they conquered.

The most popular modern theory is that of Mediterranean Man advanced by Sergi. He holds that the neolithic men of Europe came from Africa and were of a dark dolichocephalic type. Of this so-called Eur-African race one division remained in Africa and became the ancestor of the North African tribes. Another branch crossed into Europe and became Mediterranean Man inhabiting the northern shores and islands of that sea. A third branch also entered Europe, but pushed to the north and so produced the dark Nordic race. They did not speak an Indo-European language; but reached a comparatively high stage of civilization. Then they were overrun by the Indo-Europeans from Asia who were a fair, brachycephalic, barbarous people and gave their language to the races they subdued. The loin cloth worn by Minoan and Mycenaean men is said to support this view, for it is believed that it proves that they once lived in a much warmer climate. Another point relied on by Sergi is the supposed existence in some Celtic tongues of words not Indo-European. But some recent views tend to discredit the theory of the Eur-African race, though the evidence of skull types shows that the early Cretans were dolichocephalic. The home of the Indo-Europeans is now put in eastern Europe, though some still place it in Siberia, and the zoological theory of the variation of type in animals according to environment has been applied by Ridgeway with destructive force to Mediterranean Man. It is well known that the colouring of animals is largely protective, varying according to the circumstances in which they live. The Arctic hare is white in winter, but blue in summer. Similarly the striping and colouring of the different species of zebras depends on the latitude in which they are found. If this is true of other animals there is no reason why it should not be true of man as well. Thus the men of a cold and northern climate or of a mountainous region will be fair, but those who live in a warm climate will be dark and sallow. This is similar to the Greek idea that the Aethiopians were dark because they lived nearer the sun than other races. Consequently the physical likeness seen amongst the various peoples of the Mediterranean basin can be held not to be due to a similarity of race, but to similarity of environment. Likewise the difference between northern and southern Europeans would be due not so much to a diversity of race as to a difference in climate.

According to Sergi's theory of the Eur-African race the primitive people of Greece were a branch of that race and did not speak an Indo-European language. At a later date they were overrun by 'Achaean' invaders from the north who introduced Greek. The later stage of this mixed race is represented by Homer and the final supremacy of the Greek language was established during the great migration, of which the Dorian Invasion was one incident. Linguistic support for this is believed to be found in the presence in Greek of words ending in *-nth-* and *-ssos* (e.g. ἀσάμνθος, Παπρασός), which are accepted by Fick as pre-Greek. Possibly the early inhabitants of Crete were not Indo-Europeans. Herodotus (i. 173) indeed says that all Crete was once occupied by barbarians. The Minoan

civilization was in contact with Egypt, a barbarian country, from a very early time; and the survival well into historical times at Praesos in east Crete of a language written in Greek characters, which is certainly not Greek, makes it very probable that the earliest Cretans did not speak a Greek dialect. Till, however, the Minoan script can be read we cannot determine whether the 'Minoans' were Indo-Europeans or not.

35. Another theory, that of Ridgeway, divides the population of

Ridgeway's
theory.

Greece into three layers, Pelasgian, Achaean and Dorian.

The Pelasgians, the inhabitants of Greece from neolithic time, developed the Minoan and Mycenaean culture.

They were a dark race and spoke an Indo-European tongue, Greek. Later they were conquered by a tall, fair race of Celtic affinities which the Greeks called Achaean. These came from the north, settled like Norman barons in the strongholds of the earlier race and adopted their civilization and language. The flourishing period of their domination is that represented by Homer and was the great age of heroic adventure. They were overthrown by the Dorian Invasion, after which Greece gradually settled into the division of states which prevailed in classical times. The strong points of this view are many. There is abundant proof that the Minoan culture developed in the Aegean area, in Crete. Neither history nor archaeology has revealed that any other language than Greek was ever spoken in Arcadia, the heart of the Peloponnese, which no invader conquered. Further if the Achaeans, an Indo-European race, settled among an alien race and imposed their language upon them, it would be contrary to most historical experience. The Normans in England, the Visigoths in Spain and the Franks in France did not impose their languages on those they conquered, for the conquered race nearly always absorbs the conquerors. The main exception to this rule is the case of Latin in the western provinces of the Roman Empire. But there are two weak points which are serious. To hold that the Pelasgians, as Greeks themselves asserted, were aborigines and that they produced and developed the Mycenaean culture, because wherever tradition says there were once Pelasgians, Minoan and Mycenaean remains are found, is to disregard some very important archaeological evidence. Thessaly was traditionally one of the Pelasgian districts; excavations, however, have shown that the Minoan civilization did not develop there, but had its origin in Crete and was introduced into northern Greece at a comparatively late stage of its history. Again Greek tradition has no record of such an invasion of fair-haired northerners as this Achaean theory postulates. It is extremely difficult to fit an Achaean invasion into the archaeological history of the Minoan culture, which was not really overthrown till a time which agrees very well with the legendary date of the Dorian Invasion. To accept as true the Athenian story that Attica was peopled by a pure autochthonous race and to disregard the tradition that the Achaeans were equally autochthonous in the Peloponnese seems unreasonable. But the legends are so contradictory and it is so difficult to

estimate the true value of the archaeological evidence that no one theory yet put forward satisfies all the tests.

36. We must take the Greek tradition and see if it can be reconciled with the archaeological evidence. The earliest authority is Homer, who gives in two passages most valuable information about the early peoples of Greece. The first is the Catalogue in the second book of the *Iliad*. The orthodox view of critics was that the Homeric poems in their present form are a comparatively late compilation and that the Catalogue, which is condemned as inconsistent, is one of the latest additions. But latterly there has been a reaction against extreme criticism and many scholars have declared themselves believers in the substantial unity of the *Iliad*. Recent archaeological and geographical research too has shown that the once despised Catalogue is a document of great value. Naturally it is inconsistent with classical Greece, for it describes prehistoric Greece; and Agamemnon's confederacy almost exactly coincides geographically, but not culturally nor chronologically, with the area occupied by the Minoan civilization at the time of its widest diffusion. There are even signs as regards Thessaly and western Greece that the Catalogue records recent extensions of the Mycenaean area. The Trojan Catalogue has similarly been rehabilitated. It is now fairly widely accepted that the Homeric Catalogue is an old geographical document the origins of which may be referred to a date as early as 1200 B.C. This means not that it was composed then, but that it represents the political geography of the Greek area about that time. The tradition of the distribution of peoples in that age was preserved—in what form we do not know—and was used by Homer at a much later date as one of the sources for his epic.

Homeric
evidence.

The most important Homeric passage to be considered is the oft quoted one in the *Odyssey* (xix. 175 ff.) about Crete:

ἐν μὲν Ἀχαιοί,
ἐν δ' Ἐτεόκρητες μεγαλήτορες, ἐν δὲ Κύδωνες,
Δωριεῖς τε τριχάικες, δῖοί τε Πελασγοί....

The Eteocretans, whose principal city was Praesos, were probably the aborigines of eastern Crete, and the Kydones similarly the first inhabitants of western Crete. The Praesos inscriptions, already referred to, if they are Eteocretan, show that they probably did not speak Greek. This conclusion would imply that the authors of the Minoan civilization were not Hellenes; and this is supported by the statement of Herodotus about barbarians in Crete. There are still the Achaeans, the Pelasgians and the Dorians to be considered.

37. The Greeks of the classical period themselves believed that the Pelasgians were the aborigines of Greece and with them they grouped Carians and Leleges. In Homer the Pelasgians appear in the list of Priam's allies and apart from the mention of them in Crete, their home seems to be about the Hellespont.

The
Pelasgians.

It is in this very region and along the Aegæan littoral of Thrace that we find them in Herodotus and Thucydides, at Placie and Scylace, at Antandros, in Creston, in Acte, and in the islands of Lemnos, Imbros and Samothrace (Herodotus I. 57, II. 51, IV. 145, V. 26, VII. 42; Thucydides IV. 109). Both authors call them barbarians and so far all accounts of them agree. But as early as Homer there seems to be another use of the word Pelasgic, although the Pelasgi are a tribe with a fixed seat. The shrine at Dodona, which Hesiod calls Πελασγῶν ἔδρανον, is said to be that of Pelasgic Zeus, and Achilles' realm is called Pelasgic Argos. Apparently the Greeks came to use the adjective 'Pelasgian' to describe the primitive population of Greece, and this use is common in Herodotus who often mentions these hypothetical 'Pelasgians.' He calls Athenians, Argives, Aeolians, Arcadians and Dodonaeans Pelasgians, and it is quite likely that if the Achæans had not been forced by the Dorian Invasion to change their position, he would have called them Pelasgians too. But he confuses the hypothetical Pelasgians with the true Pelasgi in Thrace whom he knew, for he argues that the Pelasgians were barbarians because those in Thrace were. This would make the autochthonous Athenians barbarians, and then it becomes exceedingly difficult to explain how they and their Ionian kinsmen changed their barbarian tongue for Greek. But Herodotus' confusion and Thucydides' suggestion (I. 6) that the primitive Hellenes must have been once in a similar stage of civilization to that of barbarians shows the basis of the Greek fallacy. Their argument seems to have been, the Pelasgians are barbarians, Greece was once barbarous, therefore the Greeks are Pelasgians. These hypothetical Pelasgians appear very frequently in later authors such as Strabo and Pausanias, but apparently they owed their great popularity to Ephorus, who attempted to reduce Greek history to a system and held that the Pelasgians originated in Arcadia, the most primitive part of Greece. As to the Pelasgi in Attica and in Crete it is quite conceivable since they were a maritime people (one interpretation of their name is 'The People of the Sea') that like the Danes they made piratical raids and settlements on the Greek littoral. Hellanicus (*F.H.G.* I. 45) says that the Pelasgi were expelled by the Greeks, changed their name to Tyrseni and went to Italy. The Tyrseni are placed both by Herodotus (I. 57) and Thucydides (IV. 109) as neighbours of the Pelasgi in the north-west Aegæan. This can be supported by the tale of Herodotus (I. 94) that the Etruscans came from Lydia and the fact that in Lemnos, one of the islands where Pelasgi lived, a mysterious inscription of an Etruscan type has been found. There is one type of prehistoric pottery which might perhaps be taken as archaeological confirmation of the Pelasgi on the Thracian littoral. This is a polished, grey fabric, wheel-made and of good technique, which is known as 'Minyan' ware because it was first found at the Boeotian Orchomenus (the archaeological evidence is given in §§ 295, 297). It occurs in Melos, Argolis, Attica, Bœotia and Thessaly, and is common in the sixth and seventh

cities at Troy. So this ware appears on the Hellespont, where the Pelasgi dwelt, and in districts such as Attica which, if Herodotus is to be believed, were raided by them. But only excavation on the Thracian sea-board where the Pelasgi are said to have lived can prove or disprove this suggestion.

38. The Achaeans are considered by many modern critics, especially by Ridgeway, to have been the first northern invaders of whom we have any knowledge who entered Greece. They The Achaeans. are assumed to be a fair people of Celtic type and are credited with the introduction of the long sword, the round shield, amber and the safety-pin brooch, which all make their appearance either in Homer or in the latest phase of the Mycenaean civilization which is taken to be the Homeric. The relation of Homeric civilization and armament to the Mycenaean cannot be adequately discussed here. That long swords, body armour, greaves and amber are found in the last phase of the Mycenaean culture is undeniable, but that the Achaeans were responsible for the change in armament is not certain. Some change in civilization, which might in fact be due to a change of population, might reasonably be expected in the period when the use of iron was gradually superseding that of bronze. But while it is quite likely that such improvements did come into fashion when the Achaeans were the most powerful people in Greece, as shown in Homer for instance, tradition nowhere records that the Achaeans were invaders. In Homer the name 'Achaeans' is used in two senses and in neither application is there any indication that they are newcomers; nor does Homer show any knowledge of the alleged Phrygian origin of the Pelopids. First in the *Iliad* and *Odyssey* the name Achaeans (as well as Danaï and Argives) is used to describe comprehensively the Greek army at Troy or the Greeks in general. Secondly the Achaeans appear with the Myrmidons and Hellenes as making up the population of Achilles' kingdom in the Spercheus valley (*Il.* II. 681). The name appears to be originally tribal comparable to others such as Argives, Locrians, Boeotians and so on. But because the Achaeans were apparently the most powerful of the Greek tribes, the name Achaeans is used to include generally all the tribes in Greece. Similarly when we speak of England and the English we do not mean that the country is inhabited exclusively by Angles, for it is well known that the population includes, besides Angles, Celtic, Saxon, Danish, and Norman elements. So when Homer uses the name Achaeans (or Argives or Danaï) to describe Agamemnon's host he does not mean that it consisted entirely of one tribe; he merely uses the name of one prominent tribe as a convenient abbreviation for the whole body. The Achaeans have been considered to be invaders, formerly because the later Greek tales about the Pelasgian aborigines of Hellas were accepted as true, and latterly, since the discovery of the great Bronze Age culture of the Aegaeon, because of the difficulties experienced in any attempt to reconcile the accounts of the Homeric civilization with the

remains of the Mycenaean. But Herodotus (VIII. 73) and Pausanias (V. I. 1) both state that they were as autochthonous as the Arcadians, and that on the Dorian Invasion the so-called Ionian Migration took place from the Peloponnese which all tradition is unanimous in calling the chief seat of the Achaean power. It seems probable that the 'Ionians' who migrated were 'Achaean' from the Peloponnese who had adopted the Minoan civilization. Herodotus indeed says that the Kynourian Arcadians, who lived between the two old Achaean districts of Argos and Laconia, seemed to be Ionians who had become Dorianized. It does not seem necessary to disregard tradition and to consider the Achaeans as northern invaders. It is true that there were Achaeans in Northern Greece according to Homer, and the land round Mount Othrys close to the home of the great Achaean warrior Achilles was known in classical times as Achaia. But there is no tradition that these Achaeans were invaders from the north. On the contrary tradition says that the house of Aeacus came from Aegina and this can be supported by archaeological evidence (see § 295). Further if the Achaean invasion took place before the overthrow of the Mycenaean civilization we should expect it to be reflected in the archaeological remains, especially in the pottery. But no such reflection has yet been found.

The tales of Danaus, the eponymous founder of Homer's Danai, Cadmus, Cecrops and other 'Phoenician' settlers in Greece can then be referred to the establishment of colonies by 'Minoans' (§ 292). The legendary dates agree well with the archaeological dates for the rise to power of Mycenae, Orchomenus and other cities. Then the transference of the main focus of the Minoan and Mycenaean civilization from Crete to the mainland which took place in the Third Late Minoan period about 1400 B.C. (the archaeological evidence is given in §§ 288, 291, 294) is reflected in Homer's mention of Achaeans in Crete and in the tale of Theseus. The name Minyae also, like the place-name Minoa, as suggested by Evans, probably indicates the colonization of parts of the mainland by the Cretan culture, which is archaeologically true. Minyae dwelt in Elis, Laconia, Boeotia and Thessaly, in districts into which the Cretan civilization was imported. The Egyptian records of the defeat of the Akaiwasha and their allies in 1230 B.C. and the laconic statement of Rameses III that the isles were restless in 1196, together with the legend of the Trojan War between 1192 and 1183, can then be taken to reflect some of the political disturbances that followed the break-up of the Cretan thalassocracy. The restlessness was probably augmented by pressure from the north which culminated in 1124 and 1104 B.C. with the Thessalian and Dorian Invasions.

39. The Dorian Invasion was a constant tradition in Greece, and there seems no reason to reject it, as Beloch does. He argues that the evidence for it is late, the earliest being Tyrtaeus (ap. Strabo 362), and Homer does not mention it. Race names, he says, are late and there is no real break

Invasions
of northern
peoples.

between the end of the Mycenaean culture and the beginning of the classical period. The Greeks invented a catastrophe whereas the penetration of northern races was gradual. But if Homer does not mention the Dorian Invasion, neither does he record the Ionian Migration which was one result of it, and if the latter be accepted the former should be. What Homer gives is a picture of pre-Dorian Greece during the transition from the Bronze to the Iron Age. Races too may exist separately, though the names applied to them may be late. The mere fact that the racial name Greek is late (not earlier than Aristotle) does not imply that Greeks never existed. There is an archaeological break between the Mycenaean and classical Greek civilization, or rather a period of transition which is not yet fully clear, but its archaeological confusion can be attributed to the disturbance caused by invaders. On the other hand archaeological evidence goes to confirm the broad outlines of Greek tradition, and if tradition is good evidence, it would be especially good when it relates to so great an upheaval. One can compare the tales of the great Celtic Invasion in 279 B.C. The Dorians always considered themselves as invaders and the antagonism between Dorian and Achaean at Argos (Herodotus v. 83; Aristotle, *Pol.* 1303^a) and Sicyon (Herodotus v. 68, 69) points to the Dorians being alien conquerors. The various forms of the tradition seem to indicate that the invasion was not one big movement of a uniform race, but several separate invasions of mixed bodies. This is shown by Herodotus' tale (i. 56) of the wanderings of the Dorians, the crossing from Naupactus into the Peloponnese, the earlier date given to the Thessalian Invasion and the legend that the Corinthians were the latest comers (Pausanias v. i. 1). There is also a hint that the earliest Dorians came by sea down the east coast of Greece. Thucydides (iv. 42) tells the story of Solygeius, the grave of Temenos was on the coast near Argos (Strabo 368), and Andron says that the Dorians reached Crete from Thessaly (*F.H.G.* II. p. 349, 4). There is a kind of pottery found in Thessaly, Attica, Argolis, the islands and Crete which stands midway between the degenerate Mycenaean wares and the earliest true geometric fabrics, and this can be quoted in support of such a theory. The home of the Dorians is given as Epeirus and since there is no reason for rejecting this, it is quite likely that they were a north Greek race with some Illyrian affinities. Herodotus (i. 56) connects the Dorians with the Macedonians, and it is quite probable that the ruling race in Macedonia was akin to the Thessalian, a point which seems to be confirmed by linguistic evidence. The legend that the Argead kings of Macedonia (Herodotus VIII. 137; Thucydides II. 99) came from Argos is explained by Appian (*Syr.* 63) as referring to the Argos in the land of the Orestae about the sources of the Haliacmon. Herodotus says that the Argead kings came from the west and settled as lords at Aegae while the princely houses of Elimiotis and Lyncestis were akin to them. They are said to have driven the Thracian Bottiaeans and Pierians eastwards, and Strabo says (330, fr. 25) that the original inhabitants of Aegae were the Bryges or

Phryges who on the Argead conquest moved into Asia Minor. If the Macedonians were a mixed race with a Greek-speaking aristocracy settled as overlords among a Thracian and Illyrian population it would explain Strabo's statement (327) that the peoples of Upper Macedonia were *δίγλωσσοι*. One of the languages was certainly Greek, and the other was most probably a Thracian or Illyrian tongue. Thus Demosthenes (*Olynth.* 3. 16, 24; *Fals. Leg.* 19. 327), since Philip was not of pure Greek race (probably the Macedonian aristocrats intermarried with their subjects), could call the Macedonians barbarians. Similarly Aeschines (*Fals. Leg.* 439) and the Hellenizing Macedonians, such as Alexander I, would call them *Ἑλληνικώτατοι*. To-day in the Balkans a Patriarchist Bulgar will be called *Ἑλληνικότατος* and an Exarchist Bulgar a barbarian, and yet both will be Bulgars in speech and race.

That the Thracians once extended further to the south-west than they did in historical times seems to be correct on the whole. Tradition (cf. C. O. Müller, *Orchomenos*, pp. 206, 213, 370) records that Thracians once dwelt in Phocis and Thessaly, and this can be supported by archaeological evidence. The Abantes, who in Homer appear in Euboea, were said to be Thracians. It is possible that they and the Perrhaebi, Magnetes and similar tribes were the remains of the old population of north-eastern Greece who had been overrun by their more civilized neighbours from the south-east. Tradition and archaeology both support this. The house of Aeacus came from Aegina to the Spercheus valley. A type of early pottery which seems indigenous in the Argolid, is found in the Spercheus valley superimposed on a local variety of the typical Thessalian ware. This may represent an 'Achaean' colony in the north, in the very region where the name Achaia survived through the historical period.

The connexion of the coming of the Macedonians with the movement of the Thracio-Phrygians to Asia Minor is quite possible. The invasion of the Macedonians, Thessalians and Dorians over the passes of Tymphrestus and Pindus and the Thracian and Ionian migrations to Asia Minor would all be part of a general movement in the Southern Balkans from west to east. A minor incident of this racial displacement would have been the Aetolian crossing into Elis. These may have been the migrations which drove the Pelasgo-Tyrsenians to Italy and they may have been originated by some pressure in the Northern Balkans, perhaps due to Celtic disturbances.

40. From the foregoing considerations it will be seen that any definite

decision on Greek ethnology would be out of place at present.

Conclusion. The Cretans who developed the Minoan civilization were clearly the pioneers of culture in the Aegean, but we cannot yet tell for certain whether they spoke Greek or not, or even if their language was Indo-European. They seem to have colonized portions of the mainland and at all events brought the greater part of it under their influence. The Peloponnese was apparently inhabited by Greek-speaking tribes, one of the

most powerful of which were the Achaeans, who seem to have formed settlements in the north about Mount Othrys and to have driven the Thracian tribes of north-eastern Greece to the north of that range. The peoples of the continent seem to have revolted about 1400 B.C. against Crete and transferred the centre of civilization and political power to cities on the mainland. Then Mycenae replaces Cnossus as the dominant force in the Aegaeon. Not long after a succession of inroads of northern peoples, collectively known as the Dorian Invasion, shattered the Achaean power and for a time obliterated civilization. The Achaeans, Minyans and Ionians, the inheritors of the Cretan culture, then wandered forth across the Aegaeon and settled in the islands and towns of the Anatolian sea-board, and even went as far afield as Cyprus. They carried with them the tradition of art and civilization which under the influence of the neighbouring oriental peoples gained fresh ideas and fresh impetus. Then as the Dorians began to establish themselves in the lands they had conquered and Greece enjoyed peace again, the Ionian colonists in Asia Minor sent back across the Aegaeon the civilization they had preserved. This artistic tradition received fresh energy from the northern blood in Greece and so produced a renaissance which we know as the classical age of Greek culture. The island bridge in the south formed by Melos and Thera or Crete, Carpathus, Rhodes, Nisyros and Cos was the great Ionian trade-route. This was the way across known to Homer (*Il.* II. 654, 671, 676) and along it were planted the first Dorian colonies which, according to legend, included a large proportion of Achaeans and Minyans (Herodotus IV. 145 ff., VII. 99; Polyaeus VII. 94; Strabo 683; Pausanias VII. 5. 2, 57. 3).

Ancient authorities assigned to the Phoenicians a large part in the origin of Greek civilization. This problem still awaits solution. In none of the places where Phoenicians are said to have settled have any definite signs of Phoenician occupation been found. It has been suggested that by Phoenicians the Cretans really were meant, although the great age of Crete is considerably older than that of Phoenicia. A recent theory which would agree with the date of the Phoenician sea-power is that they were the bringers of art and culture to Greece at the beginning of the historical period. This attempt to rehabilitate the Phoenicians has not met with much approval, for the dominant theory at present is that the Mycenaean tradition was carried over to Ionia by the Dorian Invasion and that a return wave brought back to the mainland the beginnings of Greek art and civilization.

Consequently as far as Greece is concerned it seems that the history of civilization is more important than pure ethnology. Race is hard to define, and one language and one art may embrace more than one people. Civilization in the Aegaeon originated in Crete and in spite of the changes which passed over the Greek area the Cretan tradition remained. Even if the power of the people that developed it was conquered, the race itself survived, for it is almost impossible entirely to destroy a civilized race.

Cretan civilization was the forerunner of Hellenic, and though we cannot yet tell what language the Cretans spoke, yet the early inhabitants of the Peloponnese at least seem always to have spoken Greek, if tradition is to be trusted.

Allen, *The Homeric Catalogue*, J.H.S., 1910, pp. 272 ff. Beloch, *Griechische Geschichte*, 2nd ed. Burnet, *Who was Javan?* Proceedings of the Classical Association of Scotland, 1911-12. Burrows, *The Discoveries in Crete*, 3rd ed.* Busolt, *Griechische Geschichte*. Evans, *Scripta Minoa*; *The Nine Minoan Periods**. Feist, *Kultur, Ausbreitung und Herkunft der Indogermanen*. Fick, *Vorgriechische Ortsnamen*. Forsdyke, *The Pottery called Minyan Ware*, J.H.S., 1914. Hall, *The Oldest Civilization of Greece*; *The Ancient History of the Near East*. Helbig, *Ein homerischer Rundschild mit einem Bügel*, Jahresheft XII. pp. 1 ff. Hirt, *Die Indo-Germanen*. Hoffmann, *Die Makedonen, ihre Sprache und ihr Volkstum*. Hogarth, *Ionians and the East*. Kretschmer, *Ionier und Achäer*, Glotta I. Lang, *The World of Homer*; *Homer and his Age*. Leaf, *Troy*; *Homer and History**. Mackenzie, *Cretan Palaces and the Aegean Civilization*, B.S.A., xi. ff. Meyer, *Forschungen zur alten Geschichte* I. Müller, *The Dorians*. Murray, *The Rise of the Greek Epic*, 2nd ed. Myres, *The Pelasgian Theory*, J.H.S., 1907, pp. 170 ff. Niese, *Homerische Schiffskatalog*. Poulsen, *Der Orient und die frühgriechische Kunst*. Ridgeway, *The Early Age of Greece*; *Who were the Dorians?*; *Who were the Romans?*; *Minos the Destroyer*. Ripley, *The Races of Europe*. Robert, *Studien zur Ilias*. Sergi, *The Mediterranean Race*. Thompson, *The Distribution of Mycenaean Remains and the Homeric Catalogue*; *Some Notes on Homeric Armour*, Liverpool Annals, iv. pp. 128 ff., v. pp. 1 ff. Wace and Thompson, *Prehistoric Thessaly*.

*Books marked with an * were not published when this article was written.*

I. 3. FAUNA.

41. THE fauna of Greece differs little, so far as is known, from that of Spain and Southern Italy: that is to say, it is part of the 'Mediterranean province,' in which the 'palaeartic' fauna of Europe is supplemented by southern forms common to the two sides of the Mediterranean. The birds, for instance, are for the most part those familiar to us at home, with the notable additions of vultures, hoopoes, bee-eaters, flamingos and pelicans. The reptiles, on the other hand, contain a much larger proportion of unfamiliar species, and the African element is here especially strong.

Greek writers, travellers and others, introduce us to many foreign animals whose home was in Egypt, Libya or the East. In poetry especially, fable, folk-lore and a refined mythology blend, often inextricably, with the plain tales of the naturalist; and in such allegories as that of the Labours of Hercules, the lion, the bear, the hydra and the crab are drawn from the ancient picture-book of the stars.

General character.

A. MAMMALS.

42. Apes (*πίθηκοι*), which still linger in Europe at Gibraltar (*Macacus* *inius*), were in all probability met with by early Greek mariners at the Pithecusae, a group of Italian islands of which Ischia is one. The *πίθηκος* of Aristotle was this same Barbary ape. It was probably the common pet monkey (*καλλίας, μίμω*) of the Athenians, mentioned first by Archilochus (*circa* 750 B.C.). Apes.

The squeaking bat (*τρίζουσαι νυκτερίδες*, *Od.* xxiv. 6), a bird but not a bird (Plato), was recognised as a mammal (Arist.). The large fruit-bats of Egypt and Asia Minor are perhaps alluded to by Aristotle, as the flying foxes (*άλώπεκες*), and even possibly by Homer (*ποτι μακρὸν ἐρνεὸν ὑψὸς ἀεραεῖς*, *Od.* xii. 432). Bats.

43. All our common insectivores, mole (*ἀσπάλαξ*), hedgehog (*ἐχίνος*), shrew-mouse (*μυγάλη*), were known to the Greeks. Mycenaean warriors wore prickly caps of hedgehog-skin; and the skins came also into the Athenian market (Aristoph.), probably to be used in the combing or carding of wool. The hedgehog knew a thing or two, *πόλλ' οἶδ' ἀλώπηξ, ἀλλ' ἐχίνος ἐν μέγα*. The mole, a byword for its blindness (*τυφλότερος σπάλακος*), is *T. caeca*, peculiar to southern Europe, and blinder than our own; moleskins also came to market from Boeotia (*Ach.* 879). Insectivora.

44. The rabbit (*λαγίδιον, ἡμιλάγος, κόνικλος*), a native of Western Europe, was unknown to the classical Greeks, but the hare (*λαγώς, δασύπους, Sicil. λεπορίς*) was the chief object of ancient sport. Xenophon mentions several varieties (*ἐπίπερκοι, ἐπίξανθοι, ἔλειοι, ὄρεινοί, πεδινοί*), and a smaller, longer-eared species was known from Egypt. At the present day, in the Archipelago, certain islands have only rabbits and others only hares. Rodents.

The squirrel (*σκίουρος, καμψίουρος* (Hesych.), M. Gk *βερβερίτσα*) is described by Oppian, the dormouse (*ἐλειός, Myoxus glis*, and *M. nitela*) by Aristotle. The porcupine (*ὑστριξ*) exists in Greece, and is common in Africa (Hdt.); dogs were trained to draw it from its burrow (Callim.). *Sralax typhlus*, the blind-rat (M. Gk *τυφλοπόντικος*), is often confused with *ἀσπάλαξ*, the mole.

The beaver (*κάστωρ, λάταξ, σαθέριον, σατύριον*), unknown in Greece, was common in Pontus and Scythia (Hdt., Arist.). Neither the brown rat nor its forerunner the black rat had come to Europe till long after classical times. The latter was known in the middle ages as *μῦς ὁ ποντικός* (M. Gk *ποντικός*), but the animal so called by Aristotle is not to be identified. In the Cyclades, *Mus tectorum* is the only rat found by Erhard. Mice (*μῦς, σμίνθος*) were all too plentiful. The field-mice (*ἀρουραῖοι*) sometimes amounted, as now-a-days, to a plague; it was Apollo Smintheus who, like Baal the Phoenician Sun-god, sent them and protected them. Tame white mice were kept in Apollo's temple at Hamaxitos in the Troad.

45. The African elephant was known to Herodotus; the Indian was first seen in Babylon by Ctesias (c. 420 B.C.), and the Indian elephants of Darius fought at Arbela. The ivory trade was of far greater antiquity (cf. Homer and the excavators of prehistoric sites).

46. The horse (ἵππος, ἄλογον (Diod. Sic.), M. Gk ἄλογον, ἀλογάκι) and the ass (ὄνος, M. Gk γαΐδαρος) were known from the earliest times. Africa (ἱππόβοτος Λιβύη, Oppian), and Cyrene in particular, were celebrated for their horses; as were also Thrace, Thessaly and Argos (cf. *Il.* II. 287; Pind. *P.* I. 717). Anacreon credits the Mysians with the first breeding of mules (ὄρεύς, ἡμίλονος). Various species of wild ass (ὄνος ἄγριος, ὄναγρος) were known—Libyan (Hdt.), and Syrian or Mesopotamian (Xen.). The hippopotamus of the Nile (Herod.) probably got its Greek name, ἵππος ὁ ποτάμιος, by a strange corruption of an Egyptian word, which reappears in the Hebrew *Behemoth*. The wild boar (ὕς ἄγριος, ἀγριόχοιρος) was celebrated throughout antiquity, and is still common in Greece; domesticated pigs (ὕς, σὺς, χοῖρος, κάπρος, etc.) were known from the dawn of history. The ox (βοῦς, ταῦρος) was known to, and domesticated by, all the civilized nations of antiquity, and many varieties and races are recorded. Epeirus had a gigantic breed, yielding an amphora of milk daily (Arist.). The Thracian βόες ἄγριοι of Herodotus were probably the great Auerochs (*Bos primigenius*), the *urus* of Virgil and of Caesar. Βόναςος (Arist.) was the European bison, which survives in Lithuania and the Caucasus. The sheep (ὄς, ἄρνός, κριός) had also many varieties. The Mycenaean sheep, with long outspread horns, is said by Keller to have been derived from an African race; and Libya is called πολύμηλος in Pindar. The fat-tailed Syrian sheep are described by Herodotus and by Aristotle. A Libyan wild-sheep (κριὸς ἄγριος), described by Herodotus, is *Ovis tragelephas*, which figures on a Mycenaean ornament; its European ally, the Moufflon (*Ovis musimon*), is described from Sardinia by Pausanias. The goat (αἴξ, τράγος, χίμαιρα) was likewise domesticated from the earliest times. Its flesh is eaten in the *Iliad*, and its milk and cheese were, and are, a staple of Greek diet. The wild goat (*Capra aegagrus*) or Grecian ibex is still common, as in antiquity, in Crete. The three common European deer were well known: ἔλαφος including the red and fallow deer, and πρόξ denoting the little roe; in modern Greek the roe is ζορκάδι, i.e. δορκάς. The fallow deer, *platyceros* of Pliny (M. Gk πλατώνι), is often recognisable in descriptions by its dappled hide (βαλιός). A few stories are told of the reindeer (τάρανδος) as an inhabitant of Scythia; and of the elk (ἄλκη) as a native of the Alps (Polybius), and of the country of the Kelts (Pausanias). The camel (κάμηλος) is first mentioned by Archilochus, and Aristotle has much to say of it, distinguishing the Bactrian from the Arabian species.

47. That the lion (λέων, λῆς) was found in Northern Greece 'between the Achelous and Nessus,' is gravely stated by Herodotus, Aristotle, Pausanias, and others, but is yet hard to believe;

Carnivora.

the Lion of Nemea is merely the solstitial sign of Leo, which the Lion Gate of Mycenae and similar monuments likewise represent. Ctesias brought strange tales of the tiger (τίγρις), under its Sanskrit (or Persian) name of μαρτιχόρας, the 'Man-slayer'; and King Seleucus sent a tiger to Athens. The leopard (πάρδαλις), common in Asia Minor, was known to Homer. The lynx (λύγξ, M. Gk ῥήσος, a Slavonian word) includes several species, *F. caracul*, the African and Indian species, and the European species (*F. pardina* and *F. lynx*) which Euripides, Xenophon and others speak of as a native of Greece. The cat (αἴλουρος) is mentioned by Aristophanes, doubtless as a wild cat, whose skins were brought to market by Boeotian pedlars; and Herodotus had told of the sanctity of the cat in Egypt (*F. maniculata*). The dog (κύων) was man's servant and comrade long before the dawn of Hellas, and house-dogs, watch-dogs, sheep-dogs and hounds were distinguished in Homer's time. Oppian (*Cyneg.* i.) describes a great number of breeds; and some of these, such as the great Molossian and Laconian hounds, and the little Μελιταῖα κυνίδια, or Maltese terriers, are familiar in literature. Athens would seem to have had, like Constantinople, its pariah dogs (Aristoph.), but they were excluded from the Acropolis. The wolf (λύκος) is still the dread of Greek shepherds, whose fierce dogs, probably little different from the old Molossian breed, are trained to attack it. The jackal (θῶς, M. Gk or Turkish τσακάλι), *Canis aureus*, is exactly described in Homer, as crowding round a wounded stag, then flying when the lion comes, and again returning to what the lion leaves; it is the yellow wolf (λύκος ὁ ξανθός) of Oppian, and is still found in Greece. The fox (άλώπηξ, M. Gk ἀλωπού) was always a type of cunning, and, like the wolf and the bear, a theme of fable and of folk-lore; a small species (βασσάριον, Eg. *basar*) mentioned by Herodotus, was the Fennec fox of Syria and Egypt. The domestic 'cat' of the Greeks (γάλη, γάλη κατοικίδιος, Arist. *Pax*, 1079, etc.) was a sort of large weasel, probably the white-breasted marten (*Mustela foina*). Γάλη ἄγρια or ἰκτίς was the wild marten (*Mustela foina* or *martes*), and a larger species, described in Aristotle as fond of honey and destructive to the hive, was probably *M. boccamela*. In M. Gk the marten is called κάλια, i.e. γάλη, or ἀτσιδι, i.e. ἰκτ[ισ]ίδιον, or κουνάδι, i.e. κυνίδιον, whence an early Greek printer of Venice, Andrias Counades, adopted it as his emblem. The γάλη ἄγρια and κατοικίδιος were wild and tame weasels or ferrets (*M. furo*). In Aesop the weasel appears as νυμφή, the bride, which is still (νυφίτζα) its popular Greek name; the name is euphemistic (cf. Theophr. *Char.* xvi.). It is possible that Aristotle's 'white Pontic mice' were ermines. The otter (ἔνυδρις, M. Gk σκυλοπόταμον) was valued for its fur, which, like so many others, was brought to Athens from Boeotia; Herodotus speaks of the otters in Scythia, and apparently also (but by mistake or confusion) of otters in the Nile. The bear (ἄρκτος), the king of European beasts, was familiar to the Greeks, but chiefly, as to ourselves, through folk-lore and fable. It lived, according to Pausanias, on Taygetus and Maenalus, and is still to be found in the mountains of Macedonia and Epeirus.

48. Seals (*φώκη*) are described by Homer, and figure on the coinage of Phocaea. A single species only, *P. monachus*, unknown to our own seas, inhabits the Mediterranean; of its habits but little is known. The sealskins mentioned by Herodotus as used by dwellers on the Araxes were skins of *Phoca caspica*.

49. Dolphins (*δελφίς*) of various species are very common in the Mediterranean; a small species, *φώκαινα*, mentioned by Aristotle, may or may not have been the common porpoise. The dolphin's love of music is an interesting, but non-zoological myth. *Κήτος* includes, besides the whales, any great monster of the sea. *Φάλλαυα*, a whale in Aristophanes (M. Gk *μπαλαίνα*), is a byword for the bloated Cleon.

B. BIRDS.

50. The Greeks distinguish many species, and even classes, of rapacious birds, vultures, eagles, hawks and owls; but the larger vultures and eagles were often confused. Thus in *Ag.* 138, *στυγεί δὲ δέπνον ἀετῶν*, Aeschylus is speaking of the carrion diet of the vultures. Four vultures occur in Greece: the great Lämmergeier (*Gypactus barbatus*), the Griffon (*Gyps fulvus*), the rarer black vulture (*V. cinereus*), and the small Egyptian vulture, or Pharaoh's hen (*Neophron percnopterus*), ὁ μικρὸς καὶ ἐκλευκότερος (Arist.), in M. Gk 'the cuckoo's horse' (*κούκκου ἄλογον*). The generic name, *γύψ*, includes all these. The various terms, *αἰγυπιός*, *ἄρπη*, *περκνόπτερος*, *νέρτος* (an Egyptian word), *τόργος* (Lycophron, probably also Egyptian), and *φήνη*, are not safely to be ascribed to separate species, though in particular passages their specific meaning is often clear. In later Greek, Dionysius (*de Avibus*) describes the Lämmergeier accurately, under the name *ἄρπη*; it was probably the *αἰγυπιός* of Homer (*Il.* xvii. 460, etc.). It has a habit, shared with some eagles, of dropping its prey from a height to shatter it, especially when it feeds on tortoises; and so Aeschylus, according to the legend (*Ael.* vii. 16, etc.), is said to have met his death. The griffon (M. Gk *ὄρνεον*, *σπανίτης*) is generally the 'eagle' of Scripture, the eagle-headed god Nisroch of the Assyrians, the banner of the Persian armies. Of eagles, many species occur plentifully in Greece, and of old they were doubtless still more abundant. *Ἄετός* is generic.

51. Of owls many species occur in Greece and three are very common. The great eagle owl (*Bubo ignavus*) is common in all mountainous parts, and is usually, but very doubtfully, identified with the *κύμνιδις* or *χαλκίς* of Homer; it is more certainly the *βύας* of Aristotle and later writers, the *Bubo* of Virgil (M. Gk *μπούφος*). *Ἦτός* is another and smaller horned owl (*Asio otus* or *brachyotus*, especially the latter); *αἰγοκέφαλος* was probably the long-eared owl. *Σκώψ* is the little horned owl (*Scops giu*), well described by Alexander the Myndian

(Athen. ix. 391 B), and by Aelian (xv. 28); its monotonous cry is alluded to by Aristotle. Γλαῦξ is especially the little owl, *Athene noctua* (M. Gk *κουκκουβάγια*), everywhere resident in Greece, living among ruins, down wells, and in hollow olive trees, strictly nocturnal, concealing itself during the day. It was the bird of Athena and of Athens, the city's crest, the type of Athenian coinage (γλαῦκες Δαυριωτικάί) to the last days of the independence of the city.

52. Of the Passeres, or perching-birds, though some 150 species at least exist in Greece, few are mentioned in literature, and very few before Aristotle. Κίχλη (M. Gk τσίχλα) is the Passeres. generic name for the thrush-tribe, from Homer downwards; *κόσσυφος* or *κόψιχος* is the blackbird, of which a white variety was said, or perhaps fabled, to live on Mount Cyllene; I am half inclined to suspect an ancient joke, or a dialectic misunderstanding, as to the white *pinnales*, *κορυφαί*, of the mountain. Κίχλη, in Aristotle, includes, besides the song-thrush, the migratory fieldfare and redwing; *ἰξοβόρος* is the missel-thrush, which remains to breed. *ἀηδών*, the nightingale, is probably applied, as in modern Greek, to various warblers. The singing nightingale was usually spoken of as female, as Shakespeare has it; Aristotle, like Milton, makes both male and female sing. The robin is a common resident in Greece, and *ἐρίθακος* is probably, but not certainly, to be identified with it. Other warblers are *μελαγκόρυφος*, the black-cap (or perhaps the marsh-tit); *ἐλεās*, probably the reed-warbler; *φουίκουρος*, the redstart; *ὑπολαίς*, a bird in whose nest the cuckoo lays, is supposed to be the wheatear. Ὀρχίλος or τροχίλος (in late Greek, *τρογλοδύτης*), is the wren, also known as *βασιλεύς*, the 'king of all birds'; it was hostile to the eagle, in ancient as in modern folk-lore. Σίττη is the nuthatch, a good omen to lovers; *κύανος*, a name that has been very diversely identified (though Aristotle gives a detailed description of the bird), is probably the rock-nuthatch, *Sitta neumayeri*, a bird almost peculiar to Greece and the Archipelago. *Αιγίθαλος* is a titmouse, of which Aristotle distinguishes three species, the great tit (*σπίζιτης*), the long-tailed tit or a very similar form, and the little kind which includes the tomtit and its allies, of which *P. lugubris* is the commonest in Greek (M. Gk *καλόγηρος*, *κλειδώνας*). The swallow, *χελιδών*, is the subject of innumerable poetic references, from Homer downwards. Aristotle informs us that *μία χελιδὼν ἔαρ οὐ ποιεῖ*. Athenaeus hands down to us the Rhodian swallow-song, ἦλθ', ἦλθε χελιδών, καλὰς ὥρας ἄγουσα, which the children sang on a certain day in spring: as they still sing a version of it in Greece, and as in Ireland and elsewhere they sing the wren's elegy on St Stephen's day; there are many fragments or echoes of the swallow-song in Greek poetry. *Κωτίλας* (Anacreon, etc.) was a poetic or perhaps a Boeotian word for the swallow. While *χελιδών* included the house-martin as well as the swallow, *κύψελος* may be identified as the sand-martin. **Ἄπους* is the swift, and *δρεπανίς*, a rare variety, is perhaps the large Alpine swift, *Cypselus melba*. Of the finch tribe, few are named in the early classics. Στρουθός, the sparrow, is

used by Homer (*I.* ii. 308) and others, of small birds generally; in Aristotle (*ix.* 7) it is definitely the house-sparrow (M. Gk *σπουργίτης*), for the black chin of the cock-bird is unmistakably described. *Πετροκόσσυφος* in M. Gk, and probably *λαιός* in Aristotle, are names of the blue-thrush (*Petrochelidon cyanus*), which was probably Lesbia's sparrow, and the *στρουθίον μονάζον* of the Psalms. *Φρυγίλος* may be rendered finch, but was perhaps just a familiar name for a sparrow. *Σπίζα* (M. Gk *σπίνος*) was a chaffinch; *χλωρίς* (M. Gk *φλωρι*) a greenfinch; *χρυσομήτρις*, a goldfinch; *πυραλλίς* is probably the bullfinch (M. Gk *πυρρούλας*). *Ἄκανθίς* is usually identified with the linnet, but, together with such other words as *ἀκαλανθίς*, *ἀκανθυλλίς*, *αἰγιθος* and *ἄνθος*, its meaning is somewhat doubtful and its use is chiefly in poetry or fable. *Τύραννος*, in Aristotle, is the tiny goldcrest, *μικρῶ μείζων ἀκρίδος*, *φοινικῶν λόφον ἔχων*; but it is doubtless mixed up with the common wren, under such names as *βασιλεύς*, *βασιλίσκος*, *ὄρχιλος*. *Κεβλήπυρις* may be translated redpoll, or we may follow Tristram in rendering it goldcrest: the word occurs only in *Av.* 303. Of larks (*κορυδαλλίς*) several species occur, the commonest being *A. cristata*: it is the crest of this species which is often alluded to, and through its crest the lark comes into mythological relation with the solar hoopoe. *Ψάρ*, or *ψάρος* (M. Gk *ψαρόνι*), is the common starling, always coupled in Homer with the jackdaw (*κολοιός*): its eastern ally, the beautiful rose-coloured pastor, is described in later Greek and in Latin under the name of *σελευκίς*. This bird is well known in northern Greece, where it is called *ἀγιοπούλι* on its spring migration, when it destroys the grasshoppers, and *διαβολοπούλι* in autumn, when it devours the grapes. The raven (*κόραξ*) was very common: it was the messenger of Apollo, and, with his laurel-twigs, figures on the coins of Delphi. *Κορώνη*, the crow (including the carrion and hooded crows), was also very common; it was hostile to the owl, and detested by Athena. There was a crow-song, as there was a swallow-song, and an echo of it is perhaps heard in Aristophanes (*Pax*, 1126). *Σπερμολόγος* was in all probability the rook, *μαλθακὴν ἕντα γῆρυν* (*Ar. Av.* 233): it is a resident in northern Greece. *Κίσσα*, the jay, abounds in the olive-groves: the magpie (M. Gk *καρακάξα*) is not mentioned by the older writers. *Κορακίς* is mentioned by Aristotle, and identified by its epithet *φοινικόρυνγος* as the chough; the Alpine chough is common, the Cornish chough scarcer, in Greece. The golden oriole (? *χλωρίων*, M. Gk *κιτρινοπούλι*) is not uncommon.

53. Six woodpeckers occur in Greece, four of them common. *Δρυκολάπτης* is in Aristotle the generic word, and he distinguishes

Woodpeckers
and Parrots.

three species, of which one is certainly the great black woodpecker. *Πελεκᾶς* is another name of general application.

Κελεός (Arist.) is the green woodpecker; and the other common forms are the greater and lesser spotted woodpeckers, which may be the two smaller kinds of *δρυκολάπτης* referred to by Aristotle. *Ἰνυξ*, the wryneck (*Iynx torquilla*), was sacred in Greece, as in Egypt and Assyria. It is admirably described by Aristotle. It figures often as a love-charm, the *locus classicus*

being Theocr. II.; and it was undoubtedly used in lunar rites. Its mythology is characteristically Greek, and not Latin. With the woodpeckers Aristotle mentions *κνιπολόγος*, the little tree-creeper (ἔστι δὲ καὶ τοῦτο *ξύλοκόπων*). The parrot (*ψίττακος* or *ψιττάκη*, *βίττακος* (Ctesias), *σίττακος* (Nearchus)) is mentioned by Ctesias and by Aristotle, and frequently by later authors, such as Pausanias, Arrian and Athenaeus.

54. Two kingfishers (*άλκων*, M. Gk *βασιλοπούλι*), very different in habit and appearance, are common. The pied or Smyrna kingfisher (*Ceryle rudis*), found generally on the sea-coast, has been identified with *κήρυλος*, which latter word, however, seems to be, like *άλιπορφυρίς*, but a poetic equivalent of *άλκων*. The myth of the halcyon days (*άλκωνίδες ἡμέραι*) 'when birds of calm sit brooding on the charmed wave,' the exaggerated or mythical descriptions of the halcyon's plaintive song (cf. *Il.* ix. 563; Eur. *I.T.* 1089), and the story in Aelian and Plutarch of the female carrying the old male on her back, are mysteries not to be explained by the zoologist.

55. Another bird of most ancient and complicated mythology is the hoopoe (*ἔποψ*, M. Gk *τζαλοπετεινός*), a passing migrant in southern Greece, but very common in northern Greece, as it is in Spain. Under Turkish rule it was reverently protected, as in ancient Egypt. From its rayed crest it was of old a solar emblem, and its mythological relations, including the obscure and curious Tereus legend, are manifold. Its note resembles that of the cuckoo, with which bird it is associated or compared, as in German folk-lore (*der Kuckuck und sein Küster*): and the Aeschylean or more probably Sophoclean fragment in Aristotle (*ix.* 49 B), which describes the metamorphosis of the hoopoe (as of the cuckoo both in Greek and English folk-lore) into a hawk, is connected with the cuckoo's singular resemblance to the latter bird. *Κουκούφα* (Horapollo) was the old Egyptian name for the hoopoe.

56. *Κόκκυξ*, the cuckoo, was a harbinger of spring (Hes. *Op. et D.*, 489, etc.). Its singular habit of laying in an alien nest was well known, and is described by Aristotle. A second and larger species of cuckoo in Greece, *Coccyzus glandarius* (M. Gk *κράνος*), lays in the nests of the jackdaw, jay, and crow: but accounts in Aristotle (*H.A.* vi. 7) of a cuckoo which builds its own nest, and in the pseudo-Aristotelian 'Book of Wonders,' of one which lays in the nests of doves and turtle-doves, are not to be explained. The bee-eater (*μέροψ*, M. Gk *μελισσοσούργος*) is one of the most beautiful and abundant of summer visitors, as is the roller (*Coracias garrula*, M. Gk *χρυσοκαράκξ*, *χαλκοκορώνη*); but neither bird is mentioned in the early classics. *Αιγοθήλας*, the nightjar or goatsucker (M. Gk [*αι*] *γιδόβυστρα*, *νυκτερίδα*), had the reputation which its name implies, and which it still everywhere bears.

57. Three pigeons, besides the domesticated varieties, are recognised in Greek literature, the wood-pigeon (*C. palumbus*), the rock-dove (*C. livia*), and the turtle-dove. The last, *τρογγών*, is

a summer visitor, while the others are resident. Πέλεια, the Epic word, is in Homer the wild rock-dove, ἧ ῥά θ' ὑπ' ἔρηκος κοίλην εἰσέεπτατο πέτρην, χηραμόν. Φάψ or φάσσα is usually the wood-pigeon or ring-dove, with which the stock-dove was compared; φάττα φάττη is Plutarch's version of 'as like as two peas.' Οἰνάς, often translated stock-dove, is a word of Semitic origin (Heb. *jona'h*, a dove). Περιστερὰ is more or less generic, but is chiefly used for the domestic bird, περιστερὰν ἐφέστιον οἰκέτιν τε (Soph. fr.). Carrier pigeons were early known, as in the pretty Anacreontic, ἐρασμὴ πέλεια. White pigeons, the sacred race of Babylon, were first seen in Greece near Mount Athos, during the Persian wars (Athen. ix. 394). Decoy pigeons were in common use, and were usually blinded (*H.A.* ix. 7). Dove-cotes (περιστερεών) are mentioned by Plato (*Theaet.* 197 c), and elaborately described by later writers. The dove is associated with Aphrodite, as with the Syrian Ashtaroth, but not in the earliest Greek: its later Christian symbolism is frequent in the Fathers. Deucalion's dove in Plutarch, ἐκ τῆς λάρνακος ἀφιειμένην, is drawn from a very ancient apologue.

58. Ἀλεκτρυών, ἀλέκτωρ, the barn-door fowl (ἀλεκτορίς, a hen, ὄρνιθις, a chick, often mentioned simply as ὄρνις, a fowl (as in *Fowls and Game-birds.* M. Gk πετεινός, a cock, ὄρνιθα, a hen), is a native of India, very early domesticated in the east; it was long spoken of as the 'Persian Bird.' It is first mentioned by Theognis and Pindar, by the former as the 'cock that crows in the morn,' ἄμος ἀλεκτρύωνων φθόγγος ἐγειρομένων. In Plato, likewise, we have 'at cock-crow,' ἀλεκτρύωνων ἀδόντων. Many breeds were known in antiquity; among others the fighting-cock; and Themistocles instituted an annual cock-fight at Athens. The cock is represented on coins of many Greek states, and the oldest representation, on coins of Himera and Dardanus, closely resembles the wild *Gallus ferrugineus* or *bankiva* of Northern India.

The pheasant, φασιανός, or later τέταρος (the latter a Median word), was introduced from Asia Minor before the time of Aristophanes. Aristotle describes the eggs as spotted, and this is said actually to be the case with wild pheasants in the Caucasus. Ταώς, the peacock (Arab. *tauwus*, etc., M. Gk παγώνι), was known in Athens in the time of the Peloponnesian wars (Athen. ix. 397 c). It was sacred to Hera, and its first home in Greece was probably in her temple at Samos. Μελαγρίς, the guinea-fowl, was a sacred bird, kept in the Acropolis, and in various temples. The Greek and Italian birds (*Gallina afra* or *numidica*) differed, the latter having a red wattle, the former a blue. This suggests that the μελαγρίς had sprung from the species now found in Abyssinia (*N. ptilorhynchus*) and had come to Athens by way of Egypt; while the *afra avis* was *N. meleagris*, a Numidian or West African bird. Ἀτταγᾶς, the francolin, a famous dainty, is now extinct and rare in Greece, and said to be fast disappearing in Asia Minor. Πέρδιξ, the partridge, is often named, and two species are distinguished by their notes: οἱ μὲν κακκαβίζουσιν, οἱ δὲ τρίζουσιν (Arist.). The latter is probably our common partridge, the former is *P. graeca* or

saxatilis, a bird very like the Indian *chukar*. *Ὄρνυξ, the quail, the most abundant of the game-birds, was captured in nets and often decoyed by a mirror: it was trained to fight, as still in Eastern Asia. The bustard, ὄπις, is still common in Greece. Xenophon tells of its capture by coursing, with horse and dog.

59. The crane, γέρανος (M. Gk λελέκι), still breeds in Macedonia and Asia Minor. Its lofty flight, οὐρανόθι πρό, and clanging cry are described by Homer and Hesiod, and its regular migrations by Aristotle and many writers. The fight with the pygmies (*Il.* III. 6) is an ancient tale, extant also in India (*Ael.* XVI. 22). The stork, πελαργός, is a summer visitor. It was revered, as by the Egyptians, for its piety. It was common in Greece before the War of Independence; but, no longer protected by the piety of the Moslems, it has become almost extinct. Various herons are included under the generic ἐρωδιός, e.g. ὁ πέλλος, the common heron, ὁ λευκός, the egret (*A. alba* and *A. gazetta*) (including also λευκερωδιός, the spoonbill, M. Gk κουλιάρι, i.e. *cuillère*), and ἀσπερίας, the bittern (Arist.). It was a symbol of Athena on various coins, e.g. of Corinth and Ambracia, and was her messenger in the *Iliad*. Ἄνοπαία (*Od.* I. 320) is probably also a heron, but the word is difficult and apparently foreign.

Crane, Stork
and Heron.

Herodotus mentions two species of ibis, the white or sacred ibis (*I. aethiopicus*), and the black, or glossy ibis (*Plegades falcinellus*). The ibis was sacred to the moon, and to Thoth or Hermes, as in a hymn of Pherecydes, ὦ Ἐρμῆς ἰβίμορφε (cf. also Plat. *Symp.* IX.).

60. Many waders are mentioned, more or less casually. Κρέξ, though often mentioned, is difficult to identify; the common identification with the corn-crake rests mainly on the assumption that the name is onomatopœic. Ἐρυθρόπους, the redshank, is common in Greece in winter. Χαραδριός is generally taken to be the stone-curlew (*Oediconemus crepitans*), but its fabulous attributes are mixed up with eastern tales of the stork (Heb. *chasad*). The τροχίλος of Herodotus, which picks leeches (βδέλλας) out of the crocodile's mouth, is the Egyptian or black-headed plover, *Pluvianus aegyptius*. Φοινικόπτερος, a flamingo, is now rare in Greece, but abundant in Egypt and Asia Minor. The purple coot or gallinule (πορφυρίων), *Porphyrio hyacinthus*, a large and very beautiful bird, is or was lately found, according to Erhard, on Lake Copais and Lake Dystos in Euboea. The common coot is abundant, and retains its ancient name, φαλαρίς, φαλαρίδα.

Waders, etc.

61. The common or mute swan, κύκνος (*Cygnus olor*), is a common bird in the Levant, and was first brought to England from Crete during the Crusades. From Homer downwards, it is frequent in poetry, and Euripides would seem to have had a predilection for the bird. The swan's song, especially its dying song, is continually alluded to, and Socrates spoke of it at the last. It is a myth, and a very beautiful myth, and is not to be explained, as some would have

Swans and
Ducks.

it, by the loud trumpet-call of the northern whooper (*C. musicus*). Geese (χήνη) are mentioned by Homer, wild geese in the *Iliad* (II. 460) and tame in the *Odyssey* (e.g. xv. 161). Χηναλώπηξ was the Egyptian goose (cf. Ael. x. 16), and both this name and πηνέλοψ are perhaps corruptions of one and the same Egyptian word. Many wild ducks occur in Greece. Νήσσα is the generic word, and the common name for the domestic duck. Βόσκας or φασκάς (Athenaeus) is a small kind, probably including the teal and garganey (*Anas crecca* and *querquedula*). Γλαύκιον (Athenaeus), a duck with yellow eyes, may very well be the golden-eye (*A. clangula*), a winter migrant to Greece.

62. The gulls, λάρος (M. Gk γλάρος, γλαρόνι), are not discriminated. Αἴθνια is a difficult word, but probably means a large gull, such as *Larus fuscus*, the lesser black-back, the commonest large gull of Greek waters. The κορώναι εἰνάλιαι (*Od.* v. 66) or θαλάσσιοι were probably shearwaters, *Puffinus anglorum*, which abound in the Aegean.

63. Κόραξ, spoken of as a sea-bird (*H.A.* VIII. 3), is the cormorant, and κολοῖός the little cormorant (*Phalacrocorax pygmaeus*). Πελεκῖνος, the pelican (M. Gk σακκάς, the Turkish for a water-carrier), is still common on the coasts of N. Greece. Κολυμβίς is a grebe, especially the little dabchick (*Podiceps minor*, M. Gk βουτηκτάρα), very common in Greece, and ἀρνευτήρ (*Il.* XVI. 742) was perhaps a larger species of diver or grebe.

64. The ostrich, στρουθός ὁ μέγας, in later Greek στρουθοκάμηλος, is mentioned by Herodotus from the Persian Gulf or the country of the Bedouin: and Xenophon met with it near the Euphrates. Aristophanes alludes to its beautiful white plumes (*Ach.* 1118), and Aristotle describes many points in its appearance and structure.

C. REPTILES AND BATRACHIA.

65. The group of reptiles consisted, for the Greeks, of serpents (ὄφειον γένος) and oviparous quadrupeds (τετράποδα ὠσότοκα), the latter including the tortoises, crocodiles, lizards and frogs. Reptiles are abundant in Greece: and some of the islands especially (e.g. Myconos), barren and treeless, are very nests of snakes and lizards. Of African species there are not a few, and common European snakes (e.g. *Coronella laevis*) grow to twice their usual size.

66. The common land tortoises (χελώνη, M. Gk ἀχελώνα), *Testudo graeca* and *marginata*, are extraordinarily abundant in Greece; and so also are several species of the little fresh-water tortoise, ἔμυς. The turtle, χελώνη ἢ θαλαττία (*Thalassochelys caretta*), is not uncommon. All were well known to Aristotle, who carefully described their

habits and reproduction. The tortoise or turtle figures on the coins of Aegina, one of the oldest coinages of Greece: whence the proverb τὰν ἀρετὰν καὶ τὰν σοφίαν νικᾶντι χελῶναι.

67. Κροκόδειλος (Eg. χάμψα) usually distinguished as κρ. ὁ ποτάμιος, is described by Herodotus. Κρ. ὁ χερσαῖος is a lizard, especially the large Egyptian *Varanus niloticus*, but in Crocodiles
and Lizards. M. Gk κροκόδειλος is the common *Stellio vulgaris* (cf. Herod. II. 59). Σαῦρος (M. Gk σαυράδα) is the generic term for the smaller lizards, of which many species occur in Greece. A large poisonous species, *Tropidosaurus algira*, is dreaded in modern Greece (M. Gk κωλόσσαυρος). Ἄσκαλαβώτης or γαλεώτης is the little climbing gecko (*Hemidactylus turcicus*, *Tarentula mauretunica*, and allied species). The chameleon, χαμαιλέον, is common in Asia Minor; there is but a single, doubtful, record of its capture in Greece.

68. Ὄφεις is generic for a serpent, of which about a dozen species are found in Greece. There are three poisonous vipers (ἔχις, ἔχιδνα), *V. aspis*, *ammodytes*, and *lebetina*. Serpents. The horned serpents of Thebes (H.A. II. 1) are *Cerastes cornutus*, the dangerous horned viper of the desert. Ἄσπης is applied to various venomous snakes, among others to the Egyptian cobra, *Naja haje*. Ὕδρος or ὕδρα is a harmless colubrine snake, such as *Tropidonotus natrix* (M. Gk νερόφιδον), but the Hydra of Lerna is mythological. Δράκων is some very large serpent, drawn perhaps from outlandish stories of the python, like Aristotle's tales of the immense serpents in Libya (H.A. VIII. 8), or Strabo's of those in India; but legends of gigantic snakes, dwelling in neighbouring caverns, are still rife among the Greek peasantry. The large serpents kept in temples, and depicted on the coins of Croton and elsewhere, were probably *Elaphis quadrilineatus* or perhaps *Coluber longissimus*. Another large but harmless Greek serpent is *C. acontites* (*Zamenis gemonensis*) (M. Gk λαφύτης), which grows to six or even eight feet long, and has an unpleasant habit of unprovoked attack. The sea-serpents of the Indian Ocean (e.g. *Hydrophis pelamys*) are mentioned by Aelian, who describes their flat, rudder-like tails.

69. Βάτραχος, the frog, was a favourite topic of the fabulist and of the comic writers, as Aristophanes' Βάτραχοι and the *Battle of the Frogs and Mice* testify. Four species are common in Greece, Frogs and
Toads. *R. temporaria*, *R. esculenta*, *Discoglossus pictus*, and the little green tree-frog, *Hyla arborea*. Φρόνη, the toad, is represented by three species, *Bufo vulgaris* and *B. viridis*, and *Bombinator igneus*. It is especially the last (Lat. *rubeta*) that is an enemy to bees, and is detested by the bee-keeper (H.A. IX. 19). It was doubtless the green tree-frog, a celebrated weather-prophet, of which Hesychius speaks: μάντις· ὁ ἐν τοῖς κήποις βάτραχος. The salamander, σαλαμάνδρα (*S. maculata* or *atra*), had the singular reputation of immunity from fire. Γύρμος is a tadpole, and κορδύλος was probably the large gill-bearing tadpole of a salamander or newt.

D. FISHES.

70. The fishes of the Mediterranean are very numerous, but for the most part strange to our eyes. While the Mediterranean species come more or less sparingly to our shores, our own staple food-fishes, such as herring, cod, haddock, whiting and plaice, are northern fishes which reach the Mediterranean rarely or not at all. Our food supply is drawn from a few fishes such as these, while that of the Mediterranean countries is drawn from a much larger variety, mostly of the 'spiny-finned fishes,' among which none greatly predominate.

71. The eel, ἔγχελυς (M. Gk χέλι), is the only fish specifically mentioned by Homer, who indeed contrasts it with all other fishes. Its generation was long obscure, and Aristotle speaks of it as produced from γῆς ἐντερα, the name still given, under another form, in Sicily (*casentulé*) to the actual larvae (Leptocephali) of the eel. Ἐγχέλις θηρᾶσθαι was a proverb (*Eg.* 864)—'to fish in muddy waters.' There were tame eels in the fountain of Arethusa (*Ael.* viii. 4). The conger (γόγγρος, M. Gk μουγγρί) was also well known. The μύραινα (*Muraena Helena*) was a delicacy. Of the herring family, ἐγκρασίχολος, the anchovy, was the chief; σαρδῖνος (Athenaeus) was probably the true sardine, or young pilchard. Ἀφύη, μεμβράς, were small worthless fish, or 'sprats,' the fry or the smaller species of the herring tribe. The bright-coloured, shore-dwelling, nest-building family of the wrasses (Labridae) are known throughout the Mediterranean as the 'thrushes' (*tordi, grive*), or by other bird-names; they appear in Greek as κίχλαι, κόσσυφοι, etc.; and their nest is described by Aristotle. Σκάρος, the parrot-wrasse (*Sc. cretensis*), was celebrated for its habit of chewing the cud, a habit which has not been re-observed.

Among the mackerel family (Scombridae), we have the tunnies, θύννος (M. Gk τουνίνα), the largest and most important food-fishes of the Mediterranean. Their routes of migration were attentively studied, and they were caught, much as pilchards are in Cornwall, in nets, watchers or 'hoosers,' θυννόσκοποι, being stationed in watch-towers or on high places ashore: but in the nets, the great fish were harpooned with a τρίαυα or θρίναξ. Ἀμία, πηλαμύς, and ὄρκυς, were other species of tunny or bonito; and πριμάδες and σκορούλαι were the young of the same fish. Ξιφίας, the sword-fish, is often captured in the tunny-nets. The smaller mackerels (σκόμβρος, κολίας) were also valued, and were, and are, especially important in the Black Sea. Ἐχειρίς, the sucking fish (*Echeneis remora*), which attaches itself by the head to floating objects, was believed to have the power of stopping or delaying vessels: the phenomenon of 'dead-water,' by which a vessel may be so arrested in her course, is now known to be due to a curious action of submarine waves. The flying-fish (*Dactylopterus volitans*) was known as χελιδών. Various gurnards (κόκκυξ) were known, and Aristotle

mentions the sound which they produce. The family of Sparidae or sea-breams contains many important food-fishes, e.g. *Cantharus lineatus* (κάνθαρος), *Pagrus vulgaris* (φάγρος), *Dentex vulgaris* (συναγρίς), *Box boops* (βώξ), *Chrysophrys auratus* (χρυσόφρυς), and *Sargus* sp. (σάργος). The fish κάλλιχθυσ, or καλλιώνυμος, is often mentioned, as is the άνθίας, both being sacred: the identification is uncertain. Grey mullets (κεστρεύς, κέφαλος, μίξων, περαΐας, χελών) were abundant and esteemed. The red mullet is τρίγλη, which name it retains in modern Greek and in Italian (*triglia*). Among the sea-perches are λάβραξ (*Labrax lupus*), the bass, a much prized fish, and όρφώς, a large species, probably *Polyprion cernuus*, but also applied (in modern Greek) to *Serranus gigas*. Χάννα and έρυθρίνος are two curious fishes, among which, according to Aristotle, only males and no females exist; they belong to the genus *Serranus*, which is known to be hermaphrodite: χάννα being *S. scriba* or *S. cabrilla*, and έρυθρίνος the brilliantly coloured *S. anthias* or *Anthias sacer*. Of the flatfishes (*Pleuronectidae*) the most prized was ψήττα, the turbot, and βούγλωσσον (M. Gk γλώσσα), the sole. Βελόνη is the little pipe-fish (*Syngnathus*), with whose singular method of reproduction Aristotle was acquainted; the name is also applied to the garfish, *Scombresox saurus* (M. Gk βελονίδι). The angler, or fishing-frog (βάτραχος, ό άλιεύς), is often mentioned by Aristotle, who includes it among the selachians, or cartilaginous fishes.

72. Of the latter, sharks, dogfish, skate, many species were known, and Aristotle's knowledge of these was peculiarly detailed. He Sharks. knew, for instance, the remarkable viviparous reproduction, and the anatomical structure of the 'placenta,' in the smooth shark, *Mustelus laevis*, γαλεός ό λείος. 'Ακανθίας is the spiny dogfish, *Acanthias vulgaris*; σκύλιον, probably *Scyllium canicula*. 'Αλώπηξ is the fox shark, or thresher (M. Gk λαμία); καρχαρίας, a large species, such as the great blue shark. Βατίς is the skate or 'thornback,' and τρυγών is the dangerous sting-ray, *Trygon pastinaca*; νάρκη is the torpedo, whose power of shock is often referred to (Plato, etc.); very explicitly by Aristotle, who, speaking (according to an emended text) of τόν τρόμον όν έχει έν τώ σώματι, uses the very word that Réaumur uses (*tremblement*), in an early modern description.

73. Few fresh-water fishes are mentioned, besides the eel. The Fresh-water fishes. *Salmonidae* (salmon, trout, etc.), abundant in the Danube, are not met with in Greece, but Aelian has a charming account of fly-fishing in Macedonia, for certain 'speckled fish.' Κυπρίνος is the carp, whose 'tongues' or rather fleshy palates were a delicacy, and βάλερος was perhaps the allied Prussian carp (*Carassius vulgaris*, It. *bulbaro*). Herodotus mentions several fishes of the Nile, such as λεπιδωός, a kind of carp, and δξύρόρυγχος (*Mormyrus oxyrhynchus*), a sacred fish of the Egyptians. Herodotus also mentions the names of two fishes of the Macedonian or Thracian lake-dwellers, πάπρακες and τίλωνες: the former were probably perch, the latter (τίλων, s. ψίλων) may have been the great silurus or sheat-fish (German *Seilen*), which is the σίλουρος of

Aelian (xiv. 25). It was probably the 'bad' fish (σαπρά) of Matt. vii. 17. A close ally of the last fish is the γλάνις, whose care for its eggs and young (as in the allied American catfishes) is carefully described by Aristotle; this is a remarkable fish, peculiar to Greece, now known as *Parasilurus Aristotelis*. The sturgeons (ἔλλοψ, ἀκκιπήσιος, or γαλεὸς ἐκ Ἐύδου, of Athenaeus), including the little sterlet, are important fishes of Northern Greece and the region of the Black Sea, migrating to the Aegean and Mediterranean.

74. The Greek fishermen still use much the same methods of fishing, by hook (ἄγκιστρον), spear (τρίαινα), net (δίκτηνον), and trap or creel (κύρτος), as are described by Oppian (*Halieut.* iii.). The nets, as of old, are of many kinds—μυρία δ' αἰόλα τοῖα δολοῤῥαφέων λίνα κόλπων. Among these are the great tunny-nets (σαγήνη, M. Gk θυννί), the seine-nets (ἀμφίβληστρα, γρίφοι), furnished with wings (πτερά), weighed with sinkers (μολυβδίδες, Soph., Plato, M. Gk μολυβήθρες), and suspended from a headline or buoy-rope (σαρδών, σαρδόμιον, Xen., M. Gk σαρδοῦνας): sometimes they are attached by bridles (χάλινα) to a sort of otter-board (M. Gk σταλίκιον). A small casting-net (M. Gk πεζόβολος, Opp. πέζα, σφαίρων) is used from the shore. Drag-nets or dredges (γαγγάμη, Strabo, γάγγαμον, Oppian, M. Gk γαγγάβα) are used for oysters, sponges and sea-urchins.

Line-fishing is practised in various ways, e.g. with the rod (ἐκ δονάκων), with a single weighted line (καθετή), or with 'long-lines' (ὄρμιαί πολυαγκίστροι, Arist., Opp.) (M. Gk παραγαδία). The scarus and mullet are caught by using the female as a decoy (cf. Opp. *Hal.* iv. 40). The octopus, clinging to the rock, or to its nest (θαλάμι), is still compelled to leave go by help of the Aristotelian κόνυζα, or of a modern equivalent, tobacco.

E. INSECTS (ἔντομα).

75. Μέλισσα, the bee (κηφήν, a drone), was known and domesticated from very early times, and its economy was well understood, save that the ancients took the queen-bee for a king (βασιλεύς, ἡγεμών). The hive-bee of Greece is the 'Ligurian' bee, a little smaller and lighter coloured than our own. The 'flowery hill Hymettus' is still celebrated for its thyme and for its bees. Enemies of the bee are κλήρος, a little beetle (*Trichodes apiarius*), and the wax-moth, πυραύστης, the *tinea* of Virgil (*Galleria mellonella*), whose caterpillars were called τερηδόνες. Of other Hymenoptera, βομβύλιος is a bumble-bee (*Bombus*), of which many species are common. Σφήξ, ἀνθρήνη, σείρην and τενοθηδών, are species of wasps, or hornets: an ἀνθρήνη which catches flies, cuts off their heads and carries their bodies home (Arist.), is *Bembex*.

Bees and
Wasps.

rostrata. The *ιχνευμών*, or 'hunting-wasp,' which kills spiders, is probably *Pelopæus spirifex*. A mason-bee (*Chalicodoma muraria*) is described by Aristotle. Ants (*μύρμηξ*) are very numerous: they lay up food in summer, and do not (as in colder climates) become torpid in winter.

76. The butterfly (*ψυχή*) is conspicuous by its absence from the poetry of Greece. Aristotle describes its metamorphosis, in the case of a common 'cabbage white,' through caterpillar (*κάμπη*) and chrysalis to perfect insect. *Πηνίον* (spindle) and *ὑπερον* (pestle) are chrysalids of moths, such as the common currant-moth (*Abraaxas grossulariata*). *Σήης* is a clothes-moth (*Tinea* sp.); *ξυλόφορος* is the singular caddis-like larva of the moth *Psyche*. The true silk-worm was unknown until the age of Justinian; but Aristotle describes a kind of silk-worm from the island of Cos, producing cocoons (*βομβύλιος*, *κεκύδαλος*). This was a large moth, probably *Lasiocampa otus*, a relation of our oak eggar.

77. Of beetles (*κολεόπτερα*, *κάνθαροι*) the most celebrated were *κάραβος*, the stag-beetle, *μηλολόνη*, a species of cockchafer or (in Arist.) a dung-beetle (e.g. *Ateuchus sacer*), the sacred Scarab Beetles. of the Egyptians. *Δαμπυρίς* or *πυγολαμπίς* is a glow-worm.

78. Next to the bee the most celebrated of Greek insects is *τέττιξ*, the cicada, of which several species exist, some more vocal than others. The chief singer is probably *C. plebeia*, Scop. Cicadas. The *τεττιγόνιον* is a small species, e.g. *C. ornii*. The male cicada (*ἡχέτης*) is alone vocal.

79. *Ἄκρις* is a grasshopper or locust, of which three or four migratory and destructive species occur in Greece. Various names occur, many of these foreign, and some referring to the larva rather than the perfect insect (e.g. *ἀπτέλαβος*, *πάρνοψ*, *τρωξάλλις*, etc.). *Ψήν* is the celebrated fig-insect (*Cynips psenes*, L.), by which the caprifigation, or cross-fertilisation, of the fig-tree is effected. Grasshoppers,
Flies, etc.

Of flies (*μύια*) many species are mentioned, e.g. *μύωψ*, a horse-fly (*Tabanus*), and *οἰστρος*, a gad-fly (e.g. *Oestrus rufibarbis*): but the *οἰστρος* of the tunny is a Crustacean parasite, probably *Cecrops latreillii*, while that of the sword-fish is *Pennella filosa*. Of a certain gnat (*ἔμπίς*), Aristotle describes the aquatic larva (*ἀσκαρίς*); this is the common 'blood-worm,' the larva of *Chironomus*.

Among small and offensive insects, not rare in Greece, are *φθειρ*, the louse (*Pediculus*), *κόρις* (*Cimex*), the bug, and *ψύλλα* (*Pulex*), the flea.

80. Of spiders (*ἀράχνια*), several species are described. *Φαλάγγια* are large venomous species, e.g. *Galeodes araneoides*. *Ψύλλα* is a jumping kind, probably *Attus scenicus*. Spiders. The most skilful spiders, whose webs Aristotle describes minutely, are such as *Epeira diadema*. *Scorpio europæus* (*σκορπίος*) is common in Greece. A curious little allied, but tailless, form, found in books, is mentioned by Aristotle (*σκορπιῶδες ἐν βιβλίῳ*, *Chelifer cancrivorus*, L.). *Ἴουλος* and *πολύπους* are centipedes and millipedes.

F. MARINE INVERTEBRATES.

81. Crustacea (μαλακόστρακα) are extremely numerous and abundant in the Mediterranean, and many forms are mentioned by Crustacea. (e.g.) Aristotle and Athenaeus. Ἄστακός is the common lobster (*Homarus vulgaris*), now rare in the Aegean, and κάραβος (Lat. *locusta*) is the much more abundant sea-crayfish or 'langouste,' *Palinurus vulgaris*; but the names seem to have become interchanged in modern Greek. The καρίδες are shrimps of various kinds, the κύφαι, or hunch-backs, corresponding to the prawns (*Palaemon*). Κράγγων is the modern genus *Squilla*. Καρκίνιον and κύλλαρος are hermit-crabs. Καρκίνος is, generically, a crab, and various species are distinguished, such as πάγουρος (M. Gk καβοῦρι), *C. pagurus*; μαῖα, probably *Maiia squinado*; ἵππος, the 'horseman crab,' *Ocyroda cursor*; ὁ ποτάμιος, *Thelphusa fluviatilis*. Πιννοθήρης is the celebrated *Pinnotheres veterum*, the guardian of the pinna-shell.

82. The cuttle-fishes (μαλάκια) are an important article of food in the Mediterranean, and were studied by Aristotle in great detail. Cuttle-fishes. Τεῦθος and τευθίς are large squids, or calamaries, the latter probably *Loligo vulgaris*, and the former *Todarodes sagittatus*. Σηπία is the common *Sepia officinalis* and its near allies; σηπίδιον, the little *Sepiola rondeletii*. Πολύπους is the octopus; ἐλεδώνη, ὄζολις and βολίταινα, the allied *Eledone aldrovandi* and *E. moschata*. Ναυτίλος is *Argonauta argo*, sacred to Aphrodite (cf. Callim. i. 6).

83. The molluscan shell-fish (ὄστρακόδεσμα), includes the univalves (μονόθυρα, στρομβώδεις), and the bivalves (δίθυρα). Of the former the purple-shell (πόρφυρα) is the most important; *Murex brandaris*, *M. trunculus*, and *Purpura haemastoma* were the species chiefly employed. All are found in heaps at Tyre and Sidon; and Monte Testaceo, near Tarentum, is said to be built of the first, which appears also on Tarentine coins. Νηρίτης includes large species (e.g. *Ranella gigantea*), and the small Trochi (It. *naridole*). Κήρυξ or σάλπιγξ is probably *Tritonium nodiferum*, still used as a horn or trumpet by Sardinian, and possibly by Greek, shepherds; it is one of the species which lays its eggs in a sort of honey-comb (κηριάειν). Αἰμορροίς (s. ἀπόρροϊς) probably includes, with *Aporrhais pespelicani*, the large Pteroceras. Στρόμβος includes such large forms as *Voluta*. Athenaeus and others mention the large Indian στρόμβος and χορίναι (i.e. cowries, M. Gk γουρουνάκι). Λέπας is a limpet, *Patella*, and θαλάττιον οὖς, the common sea-ear, *Haliothis*. Κόχλος is more or less generic, as is κοκάλια (It. *quecciole*) for the smaller kinds. Κοχλίας is a snail, *Helix*, of which various kinds are referred to, e.g. *πωματίας*, *H. pomatia*. Σέσιλος is a smaller snail, e.g. *H. arbustorum*. The Laconian σέμελος, a snail, is a Semitic word. Among the naked Gastropods is λαγώς ὁ θαλάττιος, the celebrated sea-hare, *Aplysia depilans*.

84. Among the bivalves, or Lamellibranchs, *κόγχη* is generic. **ὄστρεα* is the common oyster, but the meaning of *λιμνόστρεα* is uncertain. *Κρέις* includes *Pecten Jacobaeus* and allied species. *Σωλήν* is the razor-fish, *Solen* sp. *Χήμη* includes such forms as *Venus*, and also *Spondylus* (*χήμαι βασιλικαί, s. πελωρίαί*). *Μῦς, μύσκα* is the common mussel, *Mytilus edulis*. *Πίννα* is the great *Pinna nobilis*, celebrated for its *βύσσος*, still spun into a fabric at Tarentum, and celebrated also for the little crab which is domiciled in its shell (*πιννοτήρης*).

Lamelli-
branchiata.

85. *Τήθνον* is an Ascidian, or sea-squirt, eaten in the Mediterranean. Aristotle mentions two species, a red and a pale one, probably *Cynthia papillosa* and *Phallusia mammillata*. Of the Echinodermata, *ἀσθήρ* is a starfish, e.g. *A. rubens*. *Ἐχίνος ὁ ἐσθιώμενος* is *E. esculentus*. Other species are *ἐχ. ὁ λευκός, ἐχινόμητρα, βρύσσος, σπάταγος*, none of them to be identified with certainty. Among the Coelenterata, the chief is the precious coral, *Corallium rubrum*, *κοράλλιον, λιθόδενδρον* (Diosc.): it is probably alluded to in Pindar, *λείριον ἄνθεμον ποντίας ἑέρας*. *Ἀκαλήφη* is a sea-anemone, *Actinia*, of which certain species were, and are still, eaten in the Mediterranean: *κνίδαί* are probably similar, but inedible forms. *Πνεύμων* appears to be a jelly-fish or Medusa. Several species of sponge (*σπόγγος*) are mentioned by Aristotle and others, e.g. *τράγος, ἀπλυσία*, etc. The fine-textured sponge of Achilles, used for lining or padding armour, is probably the Turkey sponge.

Aristotle's *Historia Animalium* sums up the scientific zoology of the Greeks. The chief annotated editions are those of J. G. Schneider (1811), Aubert and Wimmer (1868), and the recent Oxford translation (1911). The works of the older naturalists, from Albertus Magnus, through Aldrovandi, Gesner, Belon, Rondelet, Jonston, Turner, Willoughby, to the days of Linnaeus and Cuvier, teem with references to Aristotle. While allusions to natural history run through the whole of Greek literature, the works of Herodotus, Aelian (who transmits many fabulous and mystical tales, especially from Egypt), Athenaeus and Oppian (*Cynegetica* and *Haliutica*, c. A.D. 180), are of particular interest to the zoologist. Among lost works, of which small fragments remain in Athenaeus and elsewhere, two are above all others to be regretted, the Ornithology of Alexander the Myndian, and the *περὶ Ὀμοίων* of Speusippus.

Bibliography.

O. Keller's *Antike Tierwelt* (two vols., Leipzig, 1909, 1913) is the best account of ancient Natural History, especially from the side of art and archaeology; an earlier work, *Die Thiere des classischen Alterthums* (1887), is still useful. Imhoof-Blumer and Keller's *Thiere und Pflanzenbilder auf Münzen und Gemmen* (1889) is a good compendium of coin-types.

Among many other books and papers on classical Natural History, the following are noteworthy: Apostolides et Yves Delage, *Les Mollusques d'après Aristote*, Arch. de Zool. Exp. et Gén., IX. 1881; Aubert, *Cephalopoden des Aristoteles*, Z. f. Wiss. Zool., 1862; J. M. Boraston, *The Birds of Homer*, J.H.S. XXXI. 1911; Buchholz, *Die drei Naturreiche nach Homer*, Leipzig, 1873; Cuvier, *Especies d'écrevisses connues des anciens*, Paris, An I.; Dedekind, *Purpurkunde*, Berlin, 1898; Th. Gill, *The remarkable story of a Greek Fish, the Glanis*, Washington, 1907; Groshans, *Fauna Homeri et Hesiodi*, Lugd.

Bat., 1839-43; Hoffman and Jordan, *Catalogue of the Fishes of Greece*, Pr. Ac. N.S. Philad., 1892; W. Houghton, *Natural History of the Ancients*, London, n. d.; Koerner, *Homericisches Thierwelt*, Berlin, 1880; Lacaze-Duthiers, *Mém. sur la Pourpre*, Ann. Sc. Nat., (4) XII. 185; Lenz, *Zoologie der alten Griechen und Römer*, Gotha, 1856; Locard, *Hist. des Mollusques dans l'Antiquité*, Lyon, 1884; T. E. Lones, *Aristotle's Researches in Natural Science*, London, 1912; Lorentz, *Die Taube im Alterthume*, Warzen, 1886; E. von Martens, *Die classischen Conchyliennamen*, Stuttgart, 1860; Joh. Müller, *Die Haien des Aristoteles*, Berlin, 1839-42; Oder, *Der Wiedehopf in der griechischen Sage*, Philol. 1888; Pischenger, *Das Vogelnest bei den gr. Dichtern*, München, 1907; Rolleston, *Domestic Cat of the Ancients*, J. Anat. and Phys., 1868; Schlieben, *Die Pferde des Alterthums*, Leipzig, 1867; J. G. Schneider, *Die Krebsarten des Aristoteles*, Berlin, 1807; Sundevall, *Thierarten des Aristoteles*, Stockholm, 1863; D'Arcy W. Thompson, *Glossary of Greek Birds*, Oxford, 1895; John Young, *Malacostraca of Aristotle*, Ann. Mag. N. H., 1865.

The following works constitute the chief part of our scanty modern literature on the zoology of Greece: Geoffroy St Hilaire, *Expédition scientifique en Morée* (vol. III.), Paris, 1832-35; Edward Forbes, *Mollusca and Radiata of the Aegean*, Br. Ass. Rep. (13), 1843; Von der Mühle, *Ornithologie Griechenlands*, Leipzig, 1844; Erhard, *Fauna der Cycladen (Wirbelthiere)*, Leipzig, 1858; Lindermayer, *Die Vögel Griechenlands*, Passau, 1860; Krüper, *Zeiten des Gehens und Kommens der Vögel Griechenlands*, Schleswig, 1875; Heldreich, *Faune de la Grèce (Vertébrés)*, Athènes, 1878; Westerlund et Blanc, *Faune malacologique de la Grèce*, Naples, 1879; Apostolides, *La Pêche en Grèce*, Athens, 1907.

I. 4. FLORA.

86. THE Mediterraneo-Oriental is one of the best defined of botanical regions. It is bounded on the north by the high-lands which extend from the Pyrenees to the Hindu-Kush, on the south by the deserts which continue from the Sahara to Baluchistan. It has been the cradle of successive civilizations which have transmitted westward the plants they had domesticated and the products they had utilised. A so-called prehistoric stream had flowed north of it from Central Asia carrying its primitive food-plants and penetrating into the Mediterranean peninsulas.

Three continents contributed to the material equipment of Greece. Asia gave its cereals and the vine already developed for wine-making, Africa the olive and flax and Europe its own pulses. But it possesses little land available for grain and the necessity of importing it in exchange for wine and oil demanded the command of the sea for which its forests supplied the material. A widespread maritime commerce brought the luxuries and refinements of urban life. The food of the rural population was as frugal as it still is in Southern Europe; that of the Arcadians was proverbial; every possible native plant was used for food, and the fact that some were only eaten in time of famine tells its own tale. Incidentally a

knowledge was acquired of other properties possessed by native plants and an empirical medicine was built up which has descended to our own day.

Necessity made the Greeks botanists; they possessed a name for every conspicuous Greek plant, and the majority of these names have come down to us. It may be due to a difference of national temperament but nothing of the kind has survived from the Romans, if it ever existed. Our knowledge of Greek botany begins with Theophrastus. A pupil and friend of Aristotle he occupies a unique position in the history of science. He stands alone without successor for two thousand years; his method was essentially modern and when the study of botany was resumed in the middle ages it advanced simply from the point where Theophrastus left it. His writings have the air of lecture-notes to be expanded on delivery; he appealed to an interested and instructed audience, for in enforcing a point he cites strings of mere names which must have been familiar. Alexander like Napoleon took scientific experts on his expedition; their reports are lost except what Theophrastus and Arrian have preserved; their description of the citron was borrowed by Virgil. Theophrastus reveals himself as an accomplished gardener with little to learn from modern horticultural practice; and he was keen to investigate its underlying principles. Market-gardening was an important industry in the neighbourhood of cities.

On the revival of learning it was assumed that the secrets of remedial medicine were to be discovered in the writings of Dioscorides alone. Vast commentaries were devoted to the identification of the plants he described, as the thread of tradition had been wholly broken. The result was vitiated by the attempt to find them in Western and Central Europe, the flora of which has little in common with that of the Mediterranean region. The difficulty has continued to the present day. But Halacsy has now given us a scientific enumeration of the native plants of Greece, and we can at any rate do something to wed a Greek name to a plant actually Greek.

In the following pages it has only been possible to enumerate plants of more than scientific interest with the briefest comments and identifications which may be accepted with some certainty.

87. Oak, in a wide sense, δρῦς (which originally simply meant tree). In Homer it is opposed to pines, *πέυκη* and *πίτυς*, who thus recognises the distinction between broad- and needle-leaved Trees, δένδρα. trees (*κωνοφόρα*). The different species (*δρῦος γένη*) received distinctive names:—Valonia oak, *φηγός* (*Quercus Aegilops*); sacred to Jove, *ὑπὸ φηγῷ πεφικυῖη Διὸς ἱρόν*, Hdt. II. 56. The name was probably first applied to the edible acorns, which were, as still, eaten roasted, *φηγῶνς σποδιοῦσι πρὸς τὸ πῦρ*, Plato, and thence passed to the tree. *βάλανος* was acorn indiscriminately, in Homer the food of swine, but the Pythian oracle called the Arcadians *βαλανηφάγοι*, and according to Galen they continued to feed on acorns when all other Greeks were using cereals. Valonia derives from *βάλανος*. Turkey oak, *ἄσπρις* in Macedonia, *αἰγίλωψ* in Anatolia (*Quercus Cerris*), yielded bitter acorns and worthless timber. Holm oak, *πρίνος* (*Quercus*

Ilex). The acorns (ἄκυλος) were fed to swine in Homer; *kalin* is Armenian for acorn. True oak, ἐτυμόδρυν (*Quercus Robur*). Extended to Macedonia and afforded swine-food. Scrub oak, πλατύφυλλος (*Quercus lanuginosa*). The prevalent species on both Aegean shores; modern experience confirms the statement of Theophrastus, πρὸς δὲ τὴν χρεῖαν τὴν οἰκοδομικὴν χεῖριστον. Cork oak, φελλός (*Quercus Suber*). First described by Theophrastus but now almost extinct in Greece and probably never plentiful. Pausanias found it in Arcadia without a name. Ἀλιφλοῖος (? *Quercus Pseudo-suber*), Mt Ida. Gall oak, ἡμερίς (*Quercus infectoria*). Described by Theophrastus from Mt Ida but is not native of Greece. It produces 'Aleppo Galls,' κηκίδες, which were and are still used in tanning. Black Poplar, αἴγειρος. Literally 'wool-tree' from the fluffy seeds. Formed the ἄλσέα Περσεφονείης, Hom., and grew with elms, αἴγειροι πετέλει τε εὐσκιον ἄλσος ἔφανον, Theocr. Abele, λεύκη (fabled from the nymph). Sacred to Heracles, λεύκαν Ἡρακλέος ἱερὸν ἔρνος, Theocr., and hence used for wreaths, ὄζων...λευκής φυλλοβολούσης, Ar. *Nub.* 1007. Aspen, κερκίς, primarily a shuttle, applied to the tree on account of its swaying leaves. Elm, πετέλα (*Ulmus glabra*). The species characteristic of S.E. Europe and W. Asia. Ὅπταν πλάτανος πετέλα ψιθυρίζη, Ar. *Nub.* 1008; πελεατικὸν οἶνον, Theocr. vii. 65. Plane, πλάτανος (*Platanus orientalis*). An Asiatic tree reaching its western limit in Greece, often planted, ἐν ἀγορᾷ δ' αὐτὸ πλάτανον εὖ διαφυτεύσομεν, Ar. *Fr.* 162. Beech, δξύνη. A northern tree, only reaching Thessaly. Manna Ash, μελία. Used for spear-shafts, ὀρεκτῆσι μελήσι, Hom. The ash proper, βουμέλιος, is only in Macedonia. Maple, ζυγία (*Acer campestre*) and σφένδαμος (*A. monspessulanum*). Hop-Hornbeam, ὄστρῦα (*Ostrya carpinifolia*). Silver Lime, φιλύρα (*Tilia argentea*). Ἔχον φλοῖον...ἐξ οὗ τοὺς στεφάνους πλέκουσιν, Photius. Nettle Tree, λωτὸς τὸ δένδρον (*Celtis australis*). Identified by Pliny with the λωτὸς τῶν λωτοφάγων; the wood was used for flutes, Λίβυς τε λωτὸς ἐκτύπει, Eur. *Tr.* 544, statues, furniture and costly doors. Willow, ἰτέα; μέλαινα (*Salix amplexicaulis*); λευκή (*S. alba*). Ἰτέαι ὠλεσίκαρποι, Hom., because they were supposed to shed their seed prematurely; primitive shields were made of wicker-work, σακέεσσι ἰτέινοισι, Theocr. Crack Willow, ἐλίκη (*Salix fragilis*). Alder, κλήθρη (*Alnus glutinosa*). Grew in Calypso's Isle. Judas Tree, σημύδα (*Cercis Siliquastrum*). Storax, στύραξ; yielded a fragrant resin still used for incense. Τὴν στύρακα θυμῶντες τὴν ἐς Ἑλλάδας Φοῖνικες ἐξάγουσι, Hdt. Terebinth, τέρμινθος (*Pistacia Terebinthus*). Yielded τερεβίνθινον ἔλαιον the original oil of turpentine, whence the name; the wood μελάντερον τῆς ἐβένου used for knife-handles; the galls κωρुकώδη for tanning.

88. Corsican Pine, πεύκη or πίτυς in Hom. (*Pinus Laricio*). Called

Corsican because οὐδὲν εἶναι πρὸς τὰ ἐν τῇ Κύρνω, Th. *H.P.*

v. 8. 1. Used for ship-building, πίτυς βλωθρή, τὴν τ' οὔρεσι...

νήιον εἶναι, Hom. Stone Pine, πίτυς κωνοφόρος, πεύκη ἡμέρος

Conifers,
κωνοφόρα.

(*Pinus Pineae*). Probably of Asiatic origin and cultivated. Supplied crowns for Isthmian games. The Bacchic θύρσος bore the cone; the seeds πιτυίδες

were eaten, hence the inducement βάλλει δὲ καὶ ἅ πένυς ὑπόθε κώνους, Theocr. Aleppo Pine, *πεύκη παραλία* (*Pinus halepensis*). Oriental Spruce, *πεύκη Ἰδαία* (*Picea orientalis*). Yielded ψάγδας ('Idaea pix') used for flavouring wine. Silver Fir, *ἐλάτη* (*Abies pectinata*). Supplied masts for ships *ιστὸν εἰλάτινον*, Hom. It was the *ἐλάτη*... ἐν Ἰδίῃ μακροτάτῃ πεφυῖα, *Π.* xiv. 287, and Strabo's *καλὴ πεύκη*. It furnished the material *δουράτεος* (secta abiete, Virg.) for the Trojan Horse. Cypress, *κυπάρισσος*. An Asiatic tree early introduced into Europe. The fragrant wood, *εὐώδης*, Hom., was used for ship-building, chests and coffins, *λάρνακας κυπαρισσίνας*, Thuc. It was exported from Crete where it was thought to be indigenous, *ἡ δὲ καλὴ Κρήτη κυπάριττον τοῖσι θεοῖσιν*, Hermipp. Cedar, *κέδρος* (*Juniperus excelsa*). A tree of W. Asia, reaching 100 ft. Used in Syria for ship-building, *χρώνται πρὸς τὰς τρηῆρεις*, Theophr. Had the Greeks known the so-called 'Cedar of Lebanon,' they would have called it *πέυκη*. Prickly Cedar, *δέξικεδρος* (*Juniperus Oxycedrus*). A shrub, the fragrant wood is useless except for fuel. It is the *θύον* of *Od.* v. 60. Phoenician Cedar, *ἄρκευθος* (*Juniperus phoenicea*). A shrub of which the wood was used in Egypt in embalming. Juniper, *κεδρίς*. Savin, *βράθυ*. Yew, *μίλος*. Its poisonous qualities were recognized.

89. The rocky shores of the Mediterranean are clothed with a shrubby aromatic vegetation called *maquis*. Its principal constituents are:—Myrtle, *μυρσίνη* and *μύρτος*; Mastick, *σχινος*; Rosemary, *λιβανωτίς*; Cistus, *κίσθος*; French Lavender, *στοιχάς*; Heath, *ἐρείκη* (*Erica arborea*) the *bruyère* of the 'briar pipe'; *φιλυρέα* (*Phillyrea media*), and *ἀσπάλαθος* (*Calycotome villosa*) a spinous shrub which takes the place of our gorse and Plato describes as the torment of tyrants in Tartarus. Over these scramble Smilax, *μίλαξ* used for garlands, and *ἀσπαραγός* (*Asparagus acutifolius*) the young shoots of which were eaten as were those of Butcher's Broom, *μυρσίνη ἄγρια*, and still in Sicily. Myrtle (not mentioned in Hom.) was sacred to Aphrodite; a wreath in her honour was *στέφανος ναυκρατίτης*, their manufacture was an industry, *στεφανη-πλοκοῦσ' ἔβροσκον ἐν ταῖς μυρρίναις*, Ar. *Thesm.* 448. At the festival of Europa in Corinth a myrtle wreath, *ἔλλωτίς*, 20 cubits in circumference, was carried, Ath. 678 A. Laurel, *δάφνη*, was sacred to Apollo and worshippers carried *δαφνηφόρους κλώνας*; the wood used as a 'fire-drill,' *τρύπανον*, in producing sacrificial fire, *τὸ τῆς δάφνης ἄριστον*, Theophr. *H.P.* v. 9. 7. Alexandrian Laurel, *δάφνη ἀλεξάνδρεια* (*Ruscus Hypoglossum*). Ivy, *κισσός*. Sacred to Bacchus; the thyrsus was wreathed with it: *ἀνὰ θύρσον τε τινάσσων κισσῶ τε στεφανωθεῖς*, Eur. *Bacch.* 80. Chaste Tree, *ἄγνος* and *λύγος* (*Vitex Agnus-castus*), *ὃν ἐν τοῖς θεομοφορίοις ὑπεστρώννυντο αἱ γυναῖκες*, Schol. Nic. Ther. 71. Oleander, *νήριον* and *ροδόδενδρον*. Box, *πύξος*. Wood used for mule-yokes, Hom., writing tablets, Ar. Dane Wort, *χαμαιάκτη*. Goat Willow, *ἐλάγνος* (*Salix Caprea*). Literally 'marsh-lamb' from the woolly seed catkins; hence 'Lamb's tails' in Devonshire. Grew on the floating islands in Lake Copais, Theophr. *H.P.* iv. 10. 2. Christ's Thorn,

Shrubs,
θάμνοι.

παλιούρος (*Paliurus australis*). Alaternus, φιλύκη (*Rhamnus Alaternus*). Tamarisk, μυρική. Honeysuckle, περικλύμενον (*Lonicera etrusca*). Rest-harrow, αἰγίπυρος and -ον (*Ononis antiquorum*), κακόν, Anthol. Mistletoe, ὑφέαρ (*Viscum album*), ἰξός (*Loranthus europaeus*).

90. Few plants with attractive flowers are noticed in Homer and there is no trace of their cultivation. The later Greeks had a keen eye for them and Theophrastus, *H.P.* vi. 6, enumerates a large number used for garlands many of which must have been grown for the purpose. Cabbage Rose, ῥοδῆ and ῥόδον (*Rosa centifolia*).

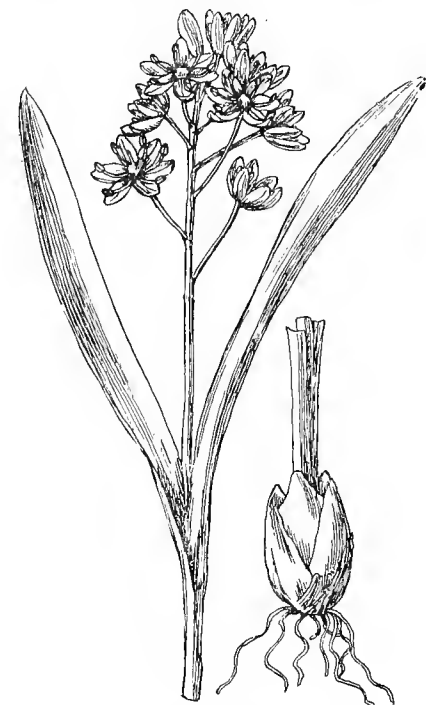


Fig. 1.



Fig. 2.

Fig. 1. The ὑάκινθος of Homer, reduced from nature. Fig. 2. Inflorescence of ὑάκινθος γραπτά (Theocr.), reduced from nature; the detached petal is drawn nearly natural size and inverted to show markings.

Of Asiatic origin; the name is a loan-word from Semitic, only occurs in Homer in epithets, first mention in Archilochus, ῥοδῆς τε καλὸν ἄνθος. Subject to 'mildew,' ἀλμᾶ νοσηματικῶς ὥσπερ ἡ ῥοδωνία, Theophr. Lily, κρίνον λευκόν, λείριον (*Lilium candidum*). Of oriental origin, represented on a vase of pre-Mycenaean age; name probably loan-word from Semitic,

only λειριόεις in Hom. and meaning merely white. Turk's Cap Lily, κρίνον πορφυροῦν (*Lilium chalcedonicum*). Martagon Lily, ἡμεροκαλλές (*Lilium Martagon*). Violet, Ἴον μέλαν and Ἴωνιά, Ἴον only once in Hom. Gilliflower, λευκόϊον (*Matthiola incana*). Narcissus, νάρκισσος. (i) ἕσωθεν πορφυροειδές, Diosc. (*Narcissus poeticus*); (ii) καλλιβοτρύς (*N. tazetta*), ἀρχαῖον στεφάνωμα to Ceres and Proserpine, Soph. *O.C.* 682, also called λείριον. Hyacinth Fig. 1, δάκνωθος (*Scilla bifolia*). This is the plant found by W. Leaf on Mt Ida; in the fifth century Codex of Dioscorides at Vienna the figure represents the Anatolian *Scilla cernua*. There was therefore a continuous tradition that ὕ. ἀργία, Theophr., was a blue *Scilla*. As early as Columella no great violence was done by giving the name to the nearly allied *Hyacinthus orientalis*, our garden plant of Syrian origin. The cult of *Hyacinthus* transferred the name to the blue Larkspur, Fig. 2 (*Delphinium Ajacis*), ὕ. σπαρτή, Theophr., and because the petals were marked with AI, γραπτά, Theocr. *Crocus*, κρίκος. The Greeks included under the name the golden-flowered species. That of Mt Ida, 'brake like fire,' Tennyson, is *Crocus gargaricus*; χρυσαυγής, Soph. *O.C.* 685 = *C. Olivieri*; χρυσανταυγής, Eur. *Ion* 890 = *C. chrysanthus*. See also Saffron. Corn Flag, ξιφίον (*Gladiolus segetum*). Rose Campion, λυχνίς (*Lychnis coronaria*). Wall-flower, φλόξ, φλόγιμον. Carnation, διόσανθος (*Dianthus inodorus*), in fresco of Mycenaean age in Crete. Anemone, ἀνεμώνη λειμωνία (*Anemone coronaria*). Goldflower, ελειόχρυσος (*Helianthemum siculum*). Drop-wort, οἰνώθη (*Spiraea Filipendula*); πωῶδες, Theophr. All these were used for floral garlands, but others were made of aromatic plants. Such were:—Lavender, ἴψυον; Water Mint, σισύμβριον; Thyme, ἔρφυλλος; Calamint, ἐλέμιον and Wormwood, ἀβρότονον. Some other plants which were not coronary may find a place here:—

Asphodel, Fig. 3, ἀσφόδελος (*Asphodelus ramosus*). The most conspicuous feature in Greek meadows, ἀσφοδελός λειμῶν, Hom., and so of the Elysian



Fig. 3. Asphodel, very much reduced, reproduced from Bodæus à Stapel, Theophrastus, 871.

fields. Ἀνθήρικος was the flower-stalk. The tuberous roots were eaten by the poor with mallow. Hence Hesiod,

νήπιοι, οὐδ' ἴσασιν, ὄσω πλέον ἤμισυ παντός,
οὐδ' ὄσον ἐν μαλάχῃ καὶ ἀσφοδέλῳ μέγ' ὄνειρα.

Epimenides is said to have lived upon these. They were planted on graves for the benefit of the dead. Water-lily, σίδη (*Nymphaea alba*). Peony, γλυκυσίδη. Primrose, δωδεκάθεον. Bear's-foot, ἄκανθος (*Acanthus mollis*), ἀμφὶ δέπας περιπέπταται ὑγρὸς ἄκανθος, Theocr. Black Bryony, βρυωνία (*Tamus communis*). The young shoots were eaten like asparagus. Grass-wracks, φύκος, *Il. ix. 7* (*Zostera marina* and *Cymodocea nodosa*), ὅμοιοι τῇ ἀγρώστει, Theophr. Duckweed, φακὸς ὁ ἐπὶ τελμάτων (*Lemna minor*). Of Ferns there were:—Maiden-hair, ἀδιαντον and πολύτριχον; Oak-fern, δρυοπτερίς (*Asplenium Onopteris*); Polypody, πολυπόδιον; Male-fern, πτέρις, a vermifuge; Bracken, θηλυπτερίς; Milt-waste, ἡμίονον (*Asplenium Ceterach*); Hart's-tongue, σκολοπένδριον; Water-wort, τριχομανές (*Asplenium Trichomanes*). Other flowerless plants were:—Horse-tail, ἵππουρις (*Equisetum maximum*). Liverwort, λειχήν (*Marchantia polymorpha*). Tree moss, βρύον (*Usnea barbata*), used for bedding, Theocr. *xxi. 7*. Of marine algae the Greeks distinguished about a dozen. Oyster Green, βρύον θαλάσσιον (*Ulva Lactuca*), is ubiquitous; φύκος φοῖνιξ (*Delessaria laciniata*); φύκος θαλάσσιον τὸ πλατὺ (*Padina mediterranea*).

91. The cultivation of the wheats, barley, oat and millets was pre-historic. That of Spelt recent research has shown to be

Cereals,
σιτηρά.

modern and it was unknown to the Greeks. Of wheats there were three kinds, all of Asiatic origin:—(i) Wheat

κατ' ἐξοχήν, πυρός (*Triticum vulgare*). No plant has played so large a part in the destiny of mankind. Two races were distinguished: winter wheat, χειμώσπορος, σίλιγγις (*siligo*) was a sort of Roman origin; spring wheat, τρίμηνος and σητάμιος. Words have preserved the successive stages by which it was made available for food. The primitive practice was to rub the grain, χίδρα, from the ear, ἀθήρ, by hand; it was roasted, πεφρυγμένα, to make it more palatable, a still surviving Eastern practice. The use of a mortar produced wheat-groats, ἀλείατα, but it required a mill to grind a coarse meal κρίμμον, meal ἄλευρον, and flour σεμίδαλις, which was a Syrian export, Φοινίκη σεμίδαλις, Hermipp. From the latter bran, πίτυρον, was separated by 'bolting'; this was made into a sort of bread, πιτυρίας, of little nutriment. Paste (κόλλα) was made from σεμίδαλις for mending books. Κρίμμον was eaten in frumenty or porridge, πόλτος. Bread in various forms was a later development and was never the food of the populace. (ii) Rice-wheat (Fig. 4 a), ὄλυρα, δίκοκκος (ζέα) (*Triticum dicoccum*), played an important part in antiquity though since little grown except in Germany for the manufacture of starch. It is now identified as the Roman *far*, the 'primus antiquis Latii cibus.' It was an important cereal in Egypt where according to Pliny it was made into a fine flour, ἀθάρη (*ador*). Bread made from it was thought less nutritious than from ordinary wheat. Coarsely

ground it was eaten as a frumenty. Pisans were made from it, *τράγος*, and when decorticated, *χόνδρος*; this was an export from Italy, *ἐκ δ' Ἰταλίας χόνδρον*, Hermipp.; it was produced of good quality in Megara, that of Thessaly was inferior. (iii) One-grained wheat (Fig. 4*b*), *τίφη*, *ἀπλή ζέα* (*Triticum monoccum*), now extends in a wild state from Achaia to Mesopotamia but is little cultivated anywhere. Schliemann found it at Troy. Used much as Rice-wheat. It was the Kussémeth of the O.T., erroneously translated 'spelt' in the R.V. Darnel, *αἶρα*, was a harmful weed amongst wheat as its grain was *κεφαλαλγής*. Barley, *κριθή*, *ἀκοστή*. Of W. Asiatic origin. The chaff is adherent to the grain (*γυμνόκριθον* was a naked kind); to make this friable it was roasted, *κάχρυσ*, like American 'pop-corn,' in a *φρύγετρον*, and then reduced to groats, *ἄλφια*. From this was made with water and olive-oil a frumenty or porridge, *μᾶζα*, which seasoned with salt and other condiments was the *δημοτικὴν τινα καὶ κοινὴν τροφήν*, Plato calls it *γενναῖα*; the play on the words in Ar. *Eg.* 55 may be preserved by translating *μᾶζαν μεμαχώς*, 'mashed him a frumenty.' Pliny notices the distinction between the ordinary food of the Roman and Greek peoples: 'Videturque tam puls ignota Graeciae fuisse quam Italiae polenta.' Barley yielded a fine flour, *πάλη*, but it was thought inferior to wheat for bread. Beer, *ζῦθος* and *κοῦρμι*, was made from it, *οἶνος ἐκ κριθῶν*, Hdt. Rye, *βρίζα*, native of S. Russia yielded an ill-smelling black bread in Thrace and Macedonia.

Oat, *βρόμος*, native of E. Europe. Eaten in porridge. In Mysia only used as a famine food, but fed to draught-cattle. The name also includes the Wild Oat (*avena*), a weed of cultivated ground (*Avena barbata*). Rice, *ὄρυζα* (hellenized from an Indian loan-word), became known through Alexander's expedition. It found its way to Greece but was dear and only used for a



Fig. 4*a*.
Rice-wheat.

Fig. 4*b*.
One-grained wheat.

(From Engler and Prantl, *Nat. Pflanzenf.* vol. ii. part 2, p. 84.)

ptisan (ptisanarium oryzæ, Hor.); *δρίνδης ἄρτος* in Sophocles reflects Old Persian *vrinda* and refers to rice by vague report. Millet, *κέγχρος*, *miliūm* (*Panicum miliaceum*), conjectured to be of Arabian and Egyptian origin. Italian Millet, *ἔλυμος* and *μελίνη*, *panicum* (*Setaria italica*). Their culture of great antiquity only persisted amongst more northern races such as the *μελινοφάγοι* in Thrace. They are only available for porridge and were displaced in Greece by more valuable cereals; the Lacedaemonians alone continuing to eat *ἔλυμος*. Both are important food grains in India. Ragi, *βόσμορος* (*Eleusine Coracana*), a staple food of the poor in India was imported into Europe at the commencement of the Christian era. Guinea Corn (*Sorghum vulgare*) though of African origin spreading eastward was unknown to the Greeks. But Theophrastus mentions a cereal without name which poisoned their horses in India and this Guinea Corn is apt to do when green. Sesame, *σήσαμον* and *σησαμηή*. Apparently of African origin spreading eastward; it is *the* oil plant of India; with the Assyrians it supplied the place of olive oil, Hdt. i. 193. Thence it found its way westward again but though its name is a Semitic loan-word (*semsem*) was unknown to the Hebrews. The seeds were sprinkled on cakes, *ὁ πλακοῦς... σησαμηή ξυμπλάττεται*, Ar. Pax, 869. Opium Poppy, *μήκων*. Of Mediterranean origin. Seeds used for bread, Diosc.; but only like *sesamum*, Galen.

92. Pulses serve as meat-substitutes and are an important food for southern peoples. Mostly of local origin their use is of great antiquity.

Pulses,
χεδροπιά.

Bean, *κίαμος*. Eaten in various ways, roasted, *κίαμον... ἐν πυρὶ φρυξεί*, Theocr. vii. 66, or boiled especially green and immature. 'Pythagoricae sententiae damnata... quoniam mortuorum animae sint in ea,' Plin. N.H. xviii. 118. 'Ὁ Αἰγύπτιος κ. was not a leguminous plant, but *Nelumbium*, allied to water-lilies; the edible seeds are buried in a broad receptacle, *κιβώριον*. Pease, *πισός*. Not mentioned in Homer but was in later ages used like the bean; pease porridge was popular, *ἔτνος γε πίσινον εὖχρων καὶ καλόν*, Ar. Eq. 1171. Lentil, *φακός*. Not mentioned in Homer but was much cultivated (and improved) from a remote time in Egypt, and an important food in Greece. *Φακῆ* also *φακοῖ* was a dish of lentils, which shows they were eaten whole; but they were the food of the poor: *ἔπειτα πλουτῶν οὐκέθ' ἦδεται φακῆ*, Ar. Pl. 1004; Pherocrates objects *τοῦ στόματος ὄζει κακόν*, steeped in vinegar they may have been more tolerable; *φακοπισίανη* was a lentil soup. Chick-pea, *ἐρέβινθος*. Coupled in *Il.* xiii. 589 with *κίαμοι* (whence Hehn identifies with *πισός*), but Plato does the same and from Theophrastus onwards the identification is certain. Eaten boiled with salt or roasted, *κάνθρακίζων τοῦρεβίνθου*, Ar. Pax, 1136, but not in porridge. Calavance, *δόλιχος* and *φασίολος* (*Dolichos sinensis*). Of Asiatic origin now cultivated in all warm countries. The pods were eaten whole with oil, either raw or cooked. Vetch, *δροβος* (*Vicia Ervilia*). Grown for fodder, but seed only (found at Troy) used for famine food; the *δρόβιον ἄλευρον* was however medicinal. Lupine, *θέρμος*. Galen calls it *πολύχρηστος*; the seeds were

eaten boiled with a sharp sauce. Fenugreek, τήλις, βούκερας. Seeds eaten like lupine.

93. Dog's tooth grass, ἄγρωστις (*Cynodon Dactylon*). Ubiquitous in Greece. Lucerne, μηδική. Introduced apparently from Asia Minor; the most important cultivated fodder crop. Ὀλγὴ δὲ τῆ πόα χρόνται οἱ κτηνοτρόφοι ἀντὶ ἀγρώστους, Diosc. II. 147; ἦσθιον δὲ τοὺς παγούρους ἀντὶ παίας μηδικῆς, Ar. Eq. 606, testifies to its familiarity. Tree medick, κύτισος (*Medicago arborea*). A native shrub. Amphilochnus the Athenian wrote a treatise on it, only surviving in Pliny's summary, 'miris laudibus praedicatur pabulo omnium,' N.H. XIII. 130, κύτισον... αἶγες ἐδόντι, Theocr. Trefoil, λωτός (τρίφυλλος). Ἐν χορτοκοπίοις γεννώμενος, Diosc. IV. 111 (*Trifolium fragiferum*). Λωτός is a name applied to a number of widely differing plants but the idea of edibility seems to underlie them all. Carob, κερωνία. Native of Western Asia. The pods κεράτια were fed to swine in Syria, Luke xv. 16, and imported into Greece; Galen finding them indigestible wishes they had not been.

94. Vine, ἄμπελος. Of W. Asiatic origin. Theophrastus knew that it grew in the Hindu-Kush, ὄρεινὴ καὶ ἄμπελον ἔχει, H.P. IV. 4. 11. Neither the Greeks nor the Romans had any definite name for it; both ἄμπελος and *vitis* like vine in English were applied to other climbing plants. Whatever may be said of *vīnum*, οἶνος is a loan-word from Semitic *yāyin* which apparently always meant wine, but οἶνος was used for fermented drinks generally, οἶ. ἐκ κριθῶν, Hdt., beer. The vine was grown in Europe in the age of bronze and widely in Greece in the Homeric. The wild stock (*Vitis silvestris*) has probably always existed in Southern Europe; it is more or less dioecious and the flowers of the barren form, οἰνάνθη, were dried and used as a perfume. The cultivated grape-vine and its product travelled west from Asia and found their way independently into the Italian and Greek Peninsulas. In the Eastern Mediterranean it was not supported, χαμίτις, though sometimes grown up trees, ἀναδενδράς. Oleaster, κότινος (*Olea Oleaster*). Native of E. Mediterranean shores. The wild stock of the olive, τὸ ἄγριον τῆς ἐλάας, Theophr., on which in later practice it was grafted; used for crowns in Olympic games, κοτινῶ στεφάνῳ, Ar. Pl. 586. Olive, ἐλαία. The traditions point to its being an introduced tree in Greece and not developed culturally from the oleaster. Schweinfurth traces it to Southern Nubia, Αἰθιοπικὴ ἐλαία, Diosc. Fabled to have been first planted by Athena in the Acropolis whence the propagated descendants were μορίαί, cuttings. Fig. Native of E. Mediterranean countries. The wild stock, ἐρινεός, simply mentioned by Hom.; its fruit, δλυνθος and ἐρινόν, was worthless, ἀχρεῖος ὦν ἐς βρώσιν, Soph. Fr. 190. The cultivated fig, συκῆ, came from Asia not earlier than Archilochus. It bore two crops in the year, διφόρου συκῆς, Ar., the earlier πρόδρομοι. It is bisexual, and figs without fertilisation do not mature seeds and cannot be dried. To effect this, ἐρινάζειν, branches of the ἐρινεός were hung near;

Fodder Plants,
βοσκή.

Fruits,
καρποφόρα.

the fig-wasp, ψήν, which lives in its fruit carried the pollen to the σῦκον. Dried figs (ἰσχάς) supplied an important food to the Athenians, Ἰσθηναῖοι δὲ σῦκα, Ael. Plum-tree, κοκκυμηλέα (*Prunus domestica*). Of Asiatic origin; the Damson-plum, δαμασκηρόν, was the finest. The Bullace, προύνη, and Sloe, βράβυλος, are European. Bird-cherry, κέρασος (*Prunus Avium*). A native forest-tree. Cornel, κράνεια (*Cornus mas*). Native; wood used for spear-shafts and bows; the berries fed to swine in Homer. Pomegranate, ῥόα and σίδη = σίβδη. Of Asiatic origin, σίδη = Persian *sēb*, first mentioned in Empedocles (fifth century), the passages in *Od.* are suspect; the flowers were κύτινος and βαλαύστιον. Citron, μῆλον μηδικόν. Asiatic. Dioscorides calls it κεδρόμηλον; the fruits were imported into Greece, and not eaten but used to preserve clothes from moths, hence supposed to be borne by a κέδρος; this became *citrus* in Lat. which returned to Greece as κίτριον. Quince, κυδωνέα. Native of W. Asia, first cultivated in Crete whence the name; fruit ἐσπερίδων μῆλα, κυδώνιον and στρούθιον. Pear, ἄπιος, ὄγγνη, Hom. European. Pears were exported from Eubœa, ἀπ' Εὐβοίας ἀπίους, Hermipp. Wild Pear, ἄχερδος (*Pyrus amygdaliformis*). Native of S. Europe. A spinous shrub, Hom., or tree; κοίλη ἄ. is a landmark in Soph. *O.C.* 1596; ἄχράς is the fruit, τῶν ἀπίων μοχθηρά, Theophr., Aristophanes, *Ecl.* 355, jokes about its astringency. Apple, μηλέα. Native of S. shores of Black Sea, but naturalized in the Mediterranean region in prehistoric times. Sorb, ὄη and οῖη (*Sorbus domestica*). A tree of S. Europe with an austere fruit which was split, dried and ground into meal. Mulberry, συκάμινον later μορέα (*Morus nigra*), Galen scoffs at the use of names 600 years old. Native south of the Caspian finding its way west through Syria. Often confused on account of resemblance of leaves with συκόμορον which is a fig; both names have a common origin in Hebrew. The white mulberry was not known to the Greeks. Μόρον seems used indiscriminately for the fruit of mulberry and blackberry; Aeschylus in Ath. 51 D describes the successive colours of the latter. Nothing in the way of *agrestia poma* apparently came amiss to a Greek peasant. Μέσπιλον stood for several nearly related trees: Medlar, ἐπιμηλῖς, and Oriental Thorn, ἀνθηδών (*Crataegus orientalis*). Blackberry, βάτος, Hom. (*Rubus ulmifolius*). Raspberry, βάτος Ἰδαία. Strawberry-tree, κόμαρος (*Arbutus Unedo*). A native tree. Galen speaks contemptuously of the mawkish fruit, μιμαίκυλον, and Dioscorides says it was unwholesome. Dog-rose, κυνόςβατος (*Rosa canina*). Theocritus thought it could not compete with the rose of gardens. Galen says that peasants got a poor nutriment from the 'hips.' The Strawberry was native but no name for it has come down to us.

95. Chestnut, Διὸς βάλανος. A tree of Pontus which has spread westward to the Mediterranean. Its fruit was κασταναικὸν κάρνον

Nuts, κάρνα.

and Σαρδιαναὶ βάλανοι; that it was introduced is inferred from neither tree nor fruit having any vernacular name. In its unimproved condition it was little esteemed as a source of food. A superior sort, ἀναθήματα δαιτός, was exported from Pontus, τὰς δὲ Διὸς βαλάνους Παφλαγόνες

παρέχουσι, Hermipp. Walnut, καρύα, fruit, κάρνον. W. Asiatic, doubtfully native in Greece. The nuts were little appreciated as food but yielded an oil. Hazel, καρύα ἡρακλεωτική. A native shrub. Galen says that it afforded a better food than the Walnut; τὰ ποντικά were probably larger nuts (filberts) than the native Greek. Almond, ἀμυγδαλή. A native of W. Asia. The name supposed to be of Semitic origin; the Greeks had μύκρος. The nut was ἀμύγαλον and κάρνον in LXX. Date-palm, φοῖνιξ. Native from the Euphrates to N. Africa but fails to ripen fruit on the northern Mediterranean shores. It is not mentioned in the *Iliad*, but the φοῖνικος γέον ἔρνος at Delos of the *Odyssey* seems to have made the fortune of the island and its leaves became the symbol of victory. Cicero says that the tree was still shown in his day. Herodotus knew, as did the Assyrians, that the date required artificial fertilisation. The fruit was φοῖνικος βάλανος, Hdt. Δάκτυλος, whence *date*, only occurs once in Aristotle and is a loan-word from Arabic. Καρυώτις according to Galen was a fine kind which grew about Jericho. From βάις, a palm-branch, we get through *badius* the colour of a bay-horse. Φοῖνιξ Ἰθθαϊκός also κόιξ is the Doum Palm of Egypt (*Hyphaene thebaica*). Φοῖνιξ χαμαιριφής is the Dwarf Palm (*Chamaerops humilis*) which is frequent in the Western Mediterranean but wanting in Greece. The 'heart' of the leaves or terminal bud, ἐγκέφαλος, was eaten as still, hence Italian name *cefaglioni*; so also of the date, Xen. *An.* 11. 3. 16.

96. The Greeks were largely vegetarians and nothing escaped them that was edible, even the young shoots of wild plants, ἀσπάραγοι. The more palatable were improved by cultivation and the proverb, ὄσφ διαφέρει σῦκα καρδάμων, marks the range from a generous to a meagre diet. Aristophanes, *Ach.* 478, jests on the mother of Euripides being a greengrocer who palmed off an inferior thing. Cabbage, βάφανος, later κράμβη (*Brassica cretica*); οὔλη was a crisped sort like our Savoy. Little valued as a food but eaten as a relish. Κραμβασπάραγος was 'sprouting broccoli.' Μὰ τὴν κράμβην was a form of oath; it was also called μάντις, Nic., perhaps from use in divination. Turnip, γογγυλῖς; γογγυλοσπάραγον, 'turnip-tops.' Navew, βοννιάς. The turnip of the south. Arum, ἄρον (*Arum italicum*). The tubers eaten like turnips. Radish, ραφανῖς. Parsnip, ἐλαφόβοσκον. Carrot, σταφυλῖνος, later καρωτόν a loan-word from Lat. Grape hyacinth, βολβός (*Muscari comosum*), a common bulbous plant. Beet, τεῦτλον. Monks' Rhubarb, λάπαθον (*Rumex Patientia*). Orache, ἀνδράφαυς, ἀδράφαυς, Theophr. Blite, βλίτον. Galen calls the last two ἄποια. Mallow, μαλάχη, later μολόχη. A common food among the poor, ἀντὶ μὲν ἄρτων μαλάχης, Ar. Charlock, λαμψάνη. Wild Chervil, σκάνδιξ (*Scandix Pecten-Veneris*) and ἔθρυσκον (*Sc. australis*). Samphire, κρήθμον. Asparagus, ἀσπάραγος (*Asparagus acutifolius*). Purslane, ἀνδράχη. Stinging nettle, ἀκαλήφη, only a famine food. Galen records that the young shoots of various thistle-like plants were eaten by peasants, as they still are; such were Cardoon, κινάρα,

Pot Herbs,
λαχανηρά.

and Golden Thistle, *σκόλυμος* (*Scolymus hispanicus*). Of cucurbits there were cultivated:—Cucumber, *σίκος*. Native of N. India; the name is a loan-word from Sanskrit; in later Greek it was called *ἀγγούριον* a word of Slavonic origin, whence *gherkin*. Melon, *πέπων*. Not without doubt, but possibly of late introduction from India. The African Water-melon did not reach Europe till the middle ages. Pumpkin, *κολόκυνθα*; of African origin. While pot-herbs were cooked and eaten with a sauce, *γάρος*, or vinegar, others like our salads were eaten raw. Such were:—Lettuce, *θρίδαξ*. It was thought insipid and the next two were eaten with it. Celery, *σέλινον*. Rocket, *εὐζωμον*. Chicory, *κιχώριον*. Endive, *σέρις*. Cress, *κάρδαμον* (*Lepidium sativum*). Native of Persia where Xenophon found it eaten with bread; the name is a loan-word from Arabic. Its pungency was stimulating, hence the proverb, *ἐσθίει κάρδαμον*. Cf. Ar. *Nub.* 236, *ἡ φροντίς ἔλκει τὴν ἱμάδ' εἰς τὰ κάρδαμα*. Water-cress, *καρδαμίνη*.

97. Tree-fungi, *ἀγαρικόν*, except the poisonous Fly Agaric, *τὸ μέλαν*.
 Mushrooms, Ground fungi, *βωλίτης*. Fairy rings, 'champignons,' *ἀμανίται*.
μύκητες. Puff Ball, *πέζις*. Truffle, *ὑδνον* and *ἴτον*.

98. A vegetarian diet such as that of the poorer Greeks taxed digestion and copious use was made of ingredients to stimulate it. As amongst all southern peoples alliaceous plants held a first place:—Onion, *κρόμμυον*. *κ. ποτῶ ὄψον*, Hom. Largely grown at Megara, hence *Μεγαρέων δάκρυα*, 'crocodile's tears.' Leek, *πράσον*, the bulb was *κεφαλωτόν*, the shredded leaves ('sectile porrum,' Mart.), *καρτόν*; *ἀμπελόπρασον* was the wild form. Garlic, *σκόροδον*. *Γέλις* was a 'head of garlic,' *φύσιγξ* its membranous investment, *ἄγλις* an individual 'clove.' It was largely grown at Megara, *Μεγαρῆς ὀδύνας πεφυσιγωμένοι*, Ar. Shallot, *ἀσκαλώνιον* also *γήτειον*; a 'clove,' *γηθυλλίς*. Others can only be briefly enumerated:—Mint, *ἡδύσμον* and *μίνθη* (*Mentha viridis*). Penny Royal, *γλήχων*. Marjoram, *ὑσσωπος*, a loan-word from Hebrew¹. Sweet Marjoram, *ἀμάρακος* and *σάμψουχον*² (*Origanum Majorana*). Native of N. Africa. Dittany of Crete, *δίκτημον* (*Origanum Dictamnus*). Basil, *ὄκιμον* (*Ocimum basilicum*). Asiatic. Costmary, *βάλσαμος* (*Chrysanthemum Balsamita*). W. Asia. Savory, *θύμβρα* (*Satureia Thymbra*). Sage, *ἐλελίσφακον*. Rue, *πήγανον*. Black Cummin, *μελάνθιον* (*Nigella sativa*). W. Asia. Mustard, *σίνηπι*. The 'seeds' (really fruits) of various umbelliferous plants were used:—Dill, *ἄνηθον*. Anise, *ἄνησσον*. Caraway, *καρώ*; the roots were also eaten. Coriander, *κόριον*. W. Asiatic. Ajowan, *ἄμι* (*Carum copticum*). Native of India, came to Greece from Egypt. Cummin, *κύμινον*. W. Asiatic. The name is a loan-word from Hebrew. *Κύμινον* and *κάρδαμον* seem to have been the cheapest in each category and supply Aristophanes with a portmanteau word for a skinflint, *κυμινο-πριστο-καρδαμο-γλύφος*, a fellow who would split a cummin-seed and stint cress; cf. Theocr. x. 55. Fennel, *μάραθον*.

¹ In John xiv. 29 it is f.l.

² In Munro's Lucretius, II. 847, *lampsana* is a misprint for *sampsuchus*.

99. Little has come down to us about Greek gardens or gardening. But it is clear that the cultivation of coronary plants and 'vegetables' must have been a considerable industry. Theophrastus shows an intimate practical acquaintance with gardening methods. Ἄδωνιδος κῆποι were small flower-pots, ὄστρακα, in which fennel, lettuce, wheat and barley were sown and withering quickly symbolized the death of Adonis. Similar flower-pots were used for plants which required care in raising them from seed. Baskets and larger pots, κεράμια, were used for growing cucumbers and pumpkins and for early roses which were forced with the aid of hot water. Aristotle gave his Botanic Garden at Athens to Theophrastus who improved it with the help of a wealthy friend, finally bequeathed it to trustees and desired to be buried in it. He no doubt cultivated in it the exotic plants with which he shows familiarity.

Gardening,
κηπευτικά.

100. The Greek Pharmacopœia was almost coextensive with the vegetable kingdom and cannot be epitomized. But the constant recurrence of εὐστόμαχος and εὐκοίλιος in Dioscorides tells a story of δυσπεψία in no way surprising. Like all southern nations they clung to purgatives; the most violent was *Herba terribilis* of the middle ages, still in vogue in the south, which was euphemistically called ἄλπιον (*Globularia Alyrium*). Squinting cucumber, σίκυς ἄγριος and ἐλατηρίον (*Ecballium Elaterium*); a no less violent purgative. The treatment of wounds unconsciously anticipates Lister. Dittany, βελουλκός, 'cum tergo volucres haesere sagittae,' Virg. *Aen.* XII. 415, facilitated their extraction as an antiseptic, and κολλητικὰ τραυμάτων acted not mechanically but by excluding 'germs.' Squill, σκίλλα (*Scilla maritima*). A plant with a large bulb still used in medicine; σχῆνος in Attic, hence Pericles was called σχινοκέφαλος on account of the shape of his head. It was planted on graves; the bulbs were hung before doors as a charm and thrown by Arcadians at the statues of Pan if the god were unpropitious, Theocr. Moly, μῶλυ (*Allium nigrum*). Theophrastus states that the Greeks identified the Homeric plant with one which grew in Arcadia, had a bulb like an onion, leaves like a squill and was used πρὸς τε τὰ ἀλεξιφάρμακα καὶ τὰς μαγείας, but could be dug up without difficulty. A characteristic feature of the Mediterranean flora is the occurrence throughout its extreme range of Umbellifers producing odoriferous gums. Amongst these were:—All Heal, πάνακες (*Oporonax hispidus*). The gum was ὀποπάναξ, smelt of crushed ivy leaves, and had in recent times a temporary vogue as a scent. Of σίλφιον there were two kinds, the African and the Asiatic. The trade in the former was so important (*Ferula tingitana*) that the plant figured on the coins of Cyrene. The dried stems were exported, Δίβυς τε καυλὸς ἐξηρασμένοι...σίλφιου, Antiph. Βάττου σίλφιον was proverbial for something costly. In Pliny's time it had been exterminated by sheep. The Asiatic plant was an *Asafoetida*. The σίλφιον found by Aristobulus on the Hindu-Kush was *Ferula alliacea*. The gum, ὀπός (often used alone), had a strong garlic flavour, hence σκορδολάσaron in late Greek.

Drugs,
φάρμακα.

It was eaten with grated cheese, τὴν τυρόκνηστὴν μοι δότω· φέρε σίλφιον, Ar. Ammoniacum, ἀμμωνιακόν (*Ferula marmarica*). A bitter gum obtained from the N. African plant, used as a θυμίαμα, as still by Mahomedans.

101. Hemlock, κώνειον. Εἰθὺς γὰρ ἀποπήγνυσι τὰντικνήμια, Ar. Thorn-apple, πέρσειον (*Datura Stramonium*). Native of Persia. Poisons, φθαρτικά. Owing to confusion with περσαία (*Mimusops Schimperi*), an African tree cultivated by the Egyptians, the myth arose that this had been brought from Persia where it was originally poisonous. Wolf's Bane, ἀκόνιτον (*Aconitum Anthora*). Native of Pontus, not found in Greece. Mandrake, μανδραγόρας (*Mandragora officinarum*). A narcotic, μ. ἢ μέθη συμποδίσαι, Plat.; given as an anæsthetic before operations. Belladonna, στρύχον μανικόν (*Atropa Belladonna*). Opium Poppy, μήκων. Native of W. Asia, and cultivated for its seed, μ. ἐν κήπῳ, Hom. and Theocr.; hence sacred to Ceres. It was doubtless early discovered that the juice of the whole plant, μηκώνιον, was soporific, but the collection of the drug, ὀπός, in Asia Minor from incised poppy heads only dates from about the commencement of the Christian era. Its use was spread by the Arabs to whom it was a substitute for forbidden wine. Autumn Crocus, κολχικόν (*Colchicum latifolium*), κτείνει κατὰ πνιγμόν, Diosc. Black Hellebore, ἐλλέβορος μέλας (*Helleborus officinalis*). White Hellebore, ἐ. λευκός (*Veratrum album*).

102. Skins were first made into leather with fat; oil is now used. Dyeing the skins probably led to the discovery of tanning materials. The most important was:—Sumach, ῥοῦς (*Rhus coriaria*). The dried leaves were and still are largely used. The fruits, ἐρυθρόν, were an ὄψον. The rind, σίδιον, of the pomegranate was also used. Of vegetable dyes the most important were:—Madder, ἐρευθέδανον and ἐρυθρόδανον (*Rubia tinctorum*). The roots were used for dyeing wool and leather. Kermes, κόκκος βαφικῆ. The female *Coccus* of the Kermes Oak, ἡ πρῖνος τὸν φοινικοῦν κόκκον φέρει, Theophr. (*Quercus coccifera*), native of N. shores of Mediterranean; a crimson dye for wool and leather now displaced by cochineal; it was called ὕσγιον from ὕσγη the Galatian name for the shrub. Litmus, φῦκος (*Roccella tinctoria*). A cosmopolitan rock-lichen. Used for dyeing wool, also as rouge for women, φ. ἀπὸ σκανᾶς, Theocr. Alkanet, ἀγχουσα (*Anchusa tinctoria*). The colour in the root, ριζίον, dissolved in oil used as rouge. Saffron, κρόκος (*Crocus sativus*). The flowers are pale purple; the dye-stuff consists in the orange-coloured styles and stigmas, θυόεσσαν ἔθειραν, Mosch. Woad, ἰσάτις (*Isatis tinctoria*). Indigo, ἰνδικόν. Imported from India, probably only known to the later Greeks.

103. The identification of the plants which supplied fibres for various purposes is not free from difficulty. The following are fairly clear:—Flax, λίνον (*Linum usitatissimum*). A W. Asian annual plant cultivated for linen from remote antiquity in Syria and Egypt; the material for sails made maritime commerce possible. Hermippus (fifth cent. B.C.), ἐκ δ' Αἰγύπτου τὰ

Textiles
and Rope-
materials,
ἱστοουργικά.

κρεμαστὰ ἰστία, describes Egypt as supplying the world. Perennial Flax, βύσσος (*Linum angustifolium*). The prehistoric flax of Europe still used in Russia. Pausanias distinguishes it from λίνον (Ἑβραίων) as a textile at Elis, where it still grows. The name is a loan-word from Hebrew and was used for any fine fibre; σινδόνος βυσσίνης, Hdt., was linen mummy cloth. Hemp, κάνναβις. Of Central Asiatic origin and only cultivated in northern latitudes; it was unknown to the Egyptians and Hebrews and to the Greeks till late. It was used for a coarse cloth in Thrace and Hieron II of Syracuse obtained it from Gaul for his rigging. Hemp-mallow, κάνναβις ἀγρία (*Althæa cannabina*). A native plant; εἰς πλοκὴν σχοινίων, Diosc. The absence of a vernacular name implies that its use was not early. Mallow, ἀμόργη (*Malva sylvestris*). A widely spread European plant which yields a fine fibre. Its identity is fixed by εἶδος βοτάνης πορφυρᾶς, E.M. Spanish Broom, σπάρτος (*Spartium junceum*). A common shrub of S. Europe, σχοινοπλοκακή, Strabo. The fibre was λευκαία and λευκόλινον. A cloth is still made from it in the S. of France. Palm-fibre, βύβλιος. While βύβλος was Papyrus of which the pithy stems supplied writing material, its obvious want of tensile strength has led Eustathius and Wilkinson to reject its use for ropes. The earliest Homeric rigging was made of twisted leather; the opinion of Pliny's day (*N.H.* xix. 25) that σπάρτα (*navium armamenta*) were like the sails made of flax was no doubt correct. But a coarser material would be used for a cable. We further learn from Pliny (xix. 31) that the Date Palm was early used by the Greeks for the purpose and rope made from it has been found in an Egyptian tomb; Pliny adds that it improved by lying in the water (xvi. 89). It might well be used for the ὄπλον βύβλιον of *Od.* xxi. 391 and for the Egyptian cable of the Hellespont bridge of Xerxes which was only half as strong as λευκόλινον. Cotton thistle, ἀκάνθιον (*Onopordum Acanthium*). Τὰ ἀκάνθια were cloths made in Cappadocia from the down stripped from the leaves.

104. Giant Fennel, νάρθηξ (*Ferula communis*). One of the most striking of the characteristic umbelliferous plants. The tough stems were used by schoolmasters as 'ferules' and carried by Bacchantes, ναρθηκοφόροι; Prometheus brought in it from heaven the spark, ναρθηκοπλήρωτος πυρός, Aesch. Pole reed, δόναξ and κάλαμος (*Aruno Donax*). Of W. Asiatic origin early introduced into Mediterranean countries. Used for flutes ἀλητικός, arrows τοξικός, pens εἰς βιβλιογραφίαν, etc. Κάννα was a loan-word from Hebrew. Reed, φραγμίτης (*Phragmites communis*). Native. Used for fences, χαρακίας. Distaff-thistle, ἀτρακτυλῖς (*Carthamus lanatus*). A thistle, ὡς δὲ βαθείαι τἀτρακτυλίδες ἐντί, Theocr.; the leafless flower stems were used for distaffs.

105. Commerce supplied the luxuries of urban civilization mostly from the East. Unguents, μύρον, were of home manufacture, but the more costly were imported from Syria and Egypt; the name is a loan-word from Hebrew. The basis was oil which has the property of extracting vegetable scents, ἀρώματα. They were

Reeds, etc.,
καλάμινα.

Imports,
ἑξωτικά.

believed to keep better if thickened with some powdered material, στῦμμα, such as the root-tubers of κύπειρος (*Cyperus rotundus*). Βάκκαρις was Asiatic, μύρον λύδιον, Hes.; what plant, if any, was its basis cannot be conjectured, but it was not βάκχαρ, 'baccar,' Virg., which was Cyclamen a coronary plant. Spikenard, νάρδος (*Nardostachys Jatamansi*), Himalayan, was a rootstock clothed with fibrous leaf-remains resembling roughly a bearded wheat-ear, hence ναρδόσταχυς. Malabathrum, μαλάβαθρον, is hellenized Sanskrit, *tamālapattra*, the leaves of *Cinnamomum Tamala*, also called φύλλον ινδικόν. There is no foundation for the absurd suggestion of Salmasius that it was *betel* or for attributing indulgence in the Indian vice to the Greeks. Pepper, πέπερι, from the Malabar coast is mentioned by Hippocrates and Theophrastus but must have been too costly for general use. The most important of all digestive stimulants, its commerce played a great part in the middle ages; it was even used as a substitute for currency (hence our peppercorn rent); incidentally it led to the discovery of the Cape of Good Hope and the consequent decay of Venice.

The literature is extensive but it is mostly obsolete from the want of accurate knowledge of the indigenous plants of Greece and of neighbouring Asia. This has now been remedied by E. de Halacsy, *Conspectus Floræ Græcæ*, Leipzig, 1901-4; and Edmond Boissier, *Flora Orientalis*, 1867-88. Of modern works the following may be consulted: Victor Hehn, *Kulturpflanzen...in ihrer Uebergang aus Asien*, ed. 8 (revised by O. Schrader and A. Engler), Berlin, 1912; F. A. Fluckiger and D. Hanbury, F.R.S., *Pharmacographia*, ed. 2, London, 1879; Alphonse de Candolle, *Origine des Plantes Cultivées*, Paris, 1883; Theodor von Heldreich, *Die Nutzpflanzen Griechenlands*, Athens, 1862; and *Chloris Homerike*, Athens, 1896; Karl Koch, *Die Bäume und Sträucher des alten Griechenlands*, Berlin, 1884; C. C. Lacaita, *Etymology of the words Crocus and Saffron*, Appendix to George Maw, *A Monograph of the Genus Crocus*, London, 1886; James Yates, *Texturimum Antiquorum*, London, 1843.

Of older works, Harold Othmar Lenz, *Botanik der alten Griechen und der Römer*, Gotha, 1859, is useful for the summaries of the passages in classical authors, but the botany is taken second hand from C. Fraas, whose *Synopsis Plantarum Floræ Classicæ*, ed. 2, Leipzig, 1870, is uncritical and badly edited; it borrows largely from Julius Billerbeck, *Flora Classica*, Leipzig, 1824, which is in turn based on Kurt Sprengel, *Historia rei herbariæ*, Amsterdam, 1807; K. Sprengel's edition of Dioscorides in the *Medicorum Græcorum Opera*, Leipzig, 1829-30, with a commentary, is indispensable as a summary of the work of previous authors, but the text is superseded by that of Max Wellmann, Berlin, 1906-7. Galen, *De Alimentis*, is invaluable and it is surprising that there is no available separate edition; the great commentary of J. Bodæus à Stapel on Theophrastus, Amsterdam, 1644, is a treasure-house of citations relating to plants from classical authors, and the *Plinianæ Exercitationes* of C. Salmasius, Utrecht, 1689, is useful in the same way.

II. HISTORY.

II. I. CHRONOLOGY.

106. THE Greeks themselves believed they possessed sufficient materials for constructing chronological tables of their history from the earliest times. Eratosthenes of Cyrene (about 276—194, head of the Alexandrian library 235 B.C.) aimed at creating a science of chronology in his treatise *περὶ χρονολογίας*. His investigations fixed the date of the principal epochs, on grounds which he considered sufficient, as follows: The fall of Troy 1184-3 B.C.: the Dorian migration 1104-3: the Ionian immigration 1044-3: the guardianship of Lycurgus 885-4: the first Olympiad 776-5: and so on to the expedition of Xerxes, the beginning and end of the Peloponnesian war, the battle of Leuctra, the death of Philip of Macedon and of Alexander the Great.

The conventional chronology.

The principles thus laid down were applied by Apollodorus of Athens, who dedicated to Attalus II of Pergamum a metrical work, *Chronica*, in four books; this became the popular handbook on the subject; the chief events from 1184 B.C. to 144 B.C. were strung together in comic iambs. Though the works of Eratosthenes and Apollodorus are lost, much of their contents has been recovered, chiefly through the Christian writers Africanus, Eusebius, Jerome and Syncellus, who borrowed from them in order to synchronize profane and Old Testament history. The received chronology rests primarily upon Eusebius and Suidas, but in the main it doubtless reproduces the conclusions of the great Alexandrine authorities, although we are often left in uncertainty as to the grounds upon which a given date was fixed.

Sextus Julius Africanus, a presbyter at Athens in the third century of our era, included in his *πεντάβιβλον χρονολογικόν* the entire history from the Creation, 5500 B.C., to A.D. 221. To this work Eusebius was indebted for the table of Olympic victors. *Ὀλυμπιάδων ἀναγραφαί*. **Eusebius** Pamphili was bishop of Caesarea in Palestine A.D. 314 to 340. His *Chronica* consisted of two parts: (1) a short outline of universal history, mostly excerpts, to serve as materials for (2) the second part or Canon, in which the various eras were synchronized and the dates down to A.D. 324 brought under the era of Abraham, 2017 B.C. Only a few fragments have reached us directly: the great task of restoring the contents of the work, begun by Scaliger and only completed in the nineteenth century, starts from (1) an Armenian translation, (2) a Syriac epitome, (3) Jerome's Latin version (continued to A.D. 378 with Roman dates added), and (4) *ἐκλογή χρονολογίας* of Georgius Syncellus (about A.D. 800), which was derived, though not directly, from Eusebius. These various sources do not always agree; even different manuscripts of Jerome sometimes differ as to a given date. Hence a new source of uncertainty wherever Eusebius is

our sole authority. **Suidas**, in the tenth century A.D., included in his comprehensive lexicon an epitome of literary history derived from Hesychius of Miletus, who compiled his *ὀνοματολόγος ἢ πίναξ τῶν ἐν παιδείᾳ ὀνομαστῶν* from good sources in the sixth century under Justinian.

107. An examination of the earlier and exclusively poetical literature (Homer, Hesiod, the Epic Cycle, the oldest lyric poets) yields hardly anything which will serve as a basis for chronology. When prose-writing began, it followed the example which the poets had set in the narration of legends and pedigrees, but an attempt was made to rationalize the old stories by reconciling conflicting versions and supplementing what was incomplete. Without contemporary records chronological accuracy is impossible. The oldest documentary evidence in Greece, going back perhaps in some cases to the eighth century B.C., consisted of official lists, especially lists of local magistrates, priests, and victors in the games. These were inscriptions; for to inscribe something in writing in a public place was always the official, and for long the only, mode of publication. When brief notices of events came to be appended to the names of magistrates there grew up annalistic local chronicles, such as Charon's 'Annals of Lampsacus,' technically called *ἄροι*, *ἄρογραφαί*: a branch of literature particularly prolific at Athens, where the *Ἀθηίδες* (*i.e.* town-chronicles of Athens) begin with Hellanicus in the fifth century, while the most famous, that of Philochorus, was written in the third century, B.C.

Throughout the historical period the Greeks dated events by the local official for the time being: at Athens the first archon, at Sparta the first ephor, at Argos the priestess of Hera, chosen for life. This may be observed in the official designations of the years 432-1, 422-1, 412-1, in documents cited by Thucydides v. 19; VIII. 58, cf. II. 2 and schol. The names of the ephors are said to have been recorded from 757-6 B.C., of the annual archons at Athens from 683-2 B.C.: the list of the Argive priestesses of Hera was published by Hellanicus. Occasionally striking natural phenomena, eclipses or volcanic eruptions, served as landmarks in the dim past. Family registers were carefully kept. About 500 B.C. Hecataeus of Miletus traced his descent in 16 generations to a god. Hippocrates of Cos, the father of medicine, born about 460, claimed descent from Asclepius at 18 removes.

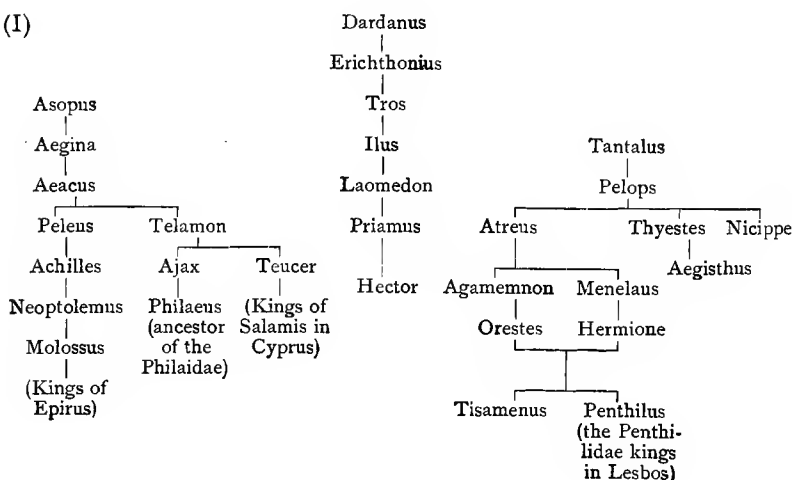
The method of dating by local officials must have been highly inconvenient from the great number of independent states and the amount of elaborate calculation and synchronism required to ensure accuracy: see Polybius XII. 11, Diodorus v. 1. For literary purposes a common basis was ultimately found in the Olympic festival, certainly used as an epoch in the third century B.C. by Timaeus of Tauromenium, and later by Polybius, Diodorus Siculus, Dionysius of Halicarnassus: indeed generally amongst Alexandrine *writers*. It never came into use in ordinary life, though it is found on a few, chiefly Olympic, inscriptions.

The festival month at Olympia was the 8th of the Eleian calendar, answering to Metageitnion, the second Attic month; hence at Athens the four-year period, called an Ὀλυμπιάς, was adjusted to begin with the new-year's day of the Attic year in which the games fell, *i.e.* with the first of Hecatombaeon (the first new moon after the summer solstice, approximately July). Thus Ol. 1. 1 covers the twelve months beginning about July, 776, and ending about June, 775 B.C. Hence the rule for converting Olympiads into modern dating B.C.: multiply the number of the Olympiads by four and if this can be subtracted from 780, the remainder gives the year B.C. when the *first* year of the given Olympiad begins: for the second, third, and fourth years respectively 1, 2, and 3 must be added before making the subtraction; for a date within the Christian era 779 should be subtracted from four times the number of the Olympiad, *e.g.* Ol. 75 begins in the middle of 480 B.C. ($780 - 4 \times 75 = 780 - 300 = 480$): while Ol. 293 begins in the middle of A.D. 393 ($4 \times 293 = 1172$ and $1172 - 779 = 393$). The first day of the Attic year, *i.e.* the new moon after the summer solstice, falls about eleven days earlier each year than the preceding year until the arrival of the intercalary year: the intercalated month makes it about eighteen days later than the year before. It has been computed, on such data as we have, that between 432 and 263 B.C. the first of Hecatombaeon fell as early as June 22, and as late as August 9, but in the great majority of years in July.

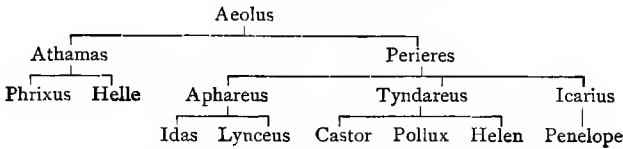
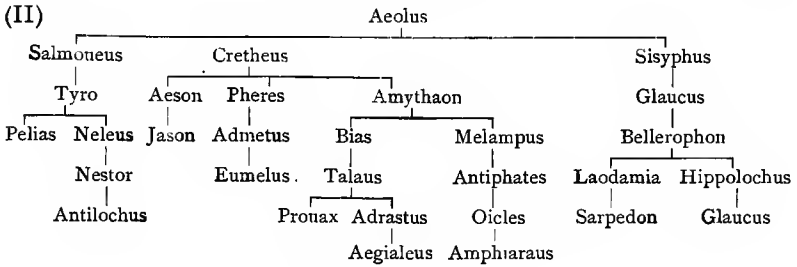
Two modern dates are required in order to include *the whole* of any Attic, or Olympic, year mentioned by our authorities: *e.g.* Ol. 75. 1 = 480–479 B.C. Wherever in the following tables a single modern year is given as an equivalent of an Attic year, this is an abbreviation; the following year must be mentally supplied. Events within a given Attic civil year, however, can repeatedly be referred with certainty to the autumn and winter, on the one hand, or to the spring and early summer, on the other. This is, from the nature of the case, comparatively easy in military operations. An ordinary campaign would begin before and end after midsummer, thus running into two official years. Herodotus reckons campaigns from spring to spring: Thucydides ignores the official dating and, as he himself explains (v. 20), divides his year into a long summer, (*i.e.* the period favourable for military operations; including spring and autumn about 8 months from the middle of March to the middle of November) and a short winter (the four months about the winter solstice). Ostracism was decreed in the sixth or seventh prytany, February or March, the performance of a play at Athens took place in the spring; the Isthmian games about April: accordingly each of these events must be referred to the latter of the two years B.C. which make up a given archon's year. When there are no indications of the season, the double B.C. dating, though clumsy, is approximately correct. It is indeed the only effectual way of guarding against the false impression, which so many chronological tables produce, that the Attic civil year (like the English civil year since A.D. 1752) began on the 1st of January.

108. In the tradition of the earliest times the main thread was genealogical. The religious rites and other privileges attaching exclusively to the members of a priestly family (*γένος*) or clan (*φρατρία*) were bound up with the belief in relationship through a common ancestor, after whom the family or clan was called. This ancestor was sometimes a god, more often a hero celebrated in story. All over Greece in historical times such patronymics are found; Aleuadae in Thessaly, Branchidae at Miletus, Butadae at Athens, Asclepiadae at Cos and in many other places. The pedigrees of the ruling families at an earlier time were traced back to some famous founder, Cadmus at Thebes, Cecrops at Athens, Inachus at Argos, Dardanus at Troy (occasionally to a woman, as Aegina for the Aeacidae), while the Pelopidae descended from Tantalus, a Lydian. The heroes described by the poets as taking part in the Argonautic expedition, the Theban or Trojan war, or the return of the Heracleidae must be considered contemporaries. Hence the divergent genealogies could be brought into connexion, and chronologers were not slow to avail themselves of the hint. Theoretically it is possible, at any stage, to convert the family-tree into a history 'in skeleton outline' of the period elapsed since the eponymous ancestor. We find this done tentatively in Homer (*e.g.* *Il.* vi. 152 sqq.), more consciously in the Hesiodic *Catalogue* and *Eoëae* (a list of famous heroines, each account beginning ἦ οἴη): the process is carried still further in the genealogies presumed or recounted by Pindar and Herodotus. A few of the leading families are here presented in tabular form.

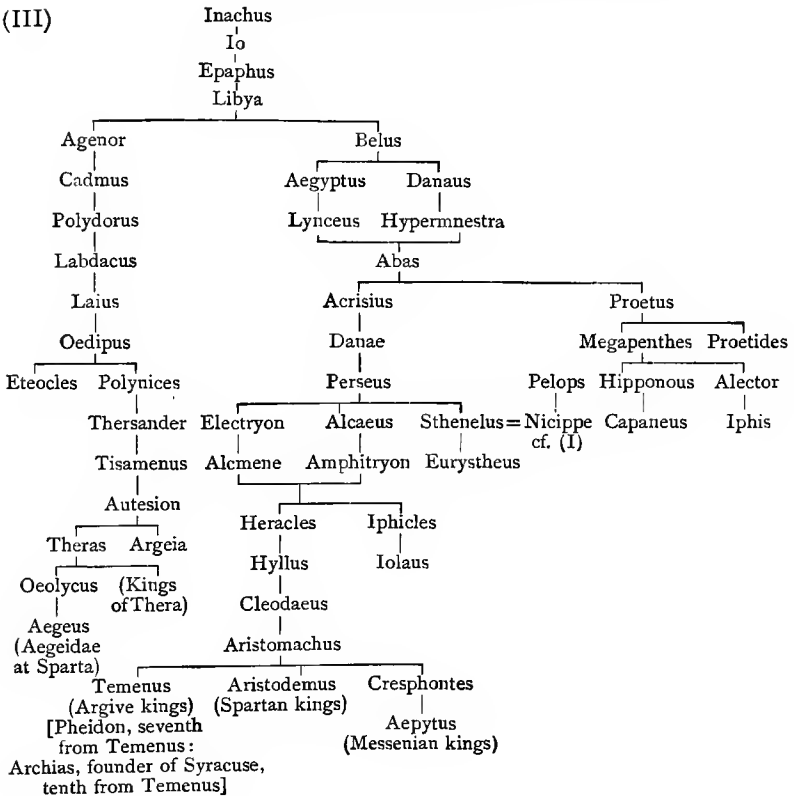
(I)



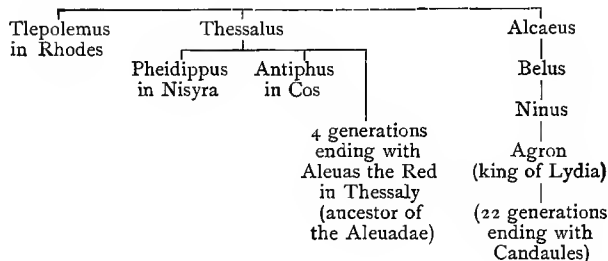
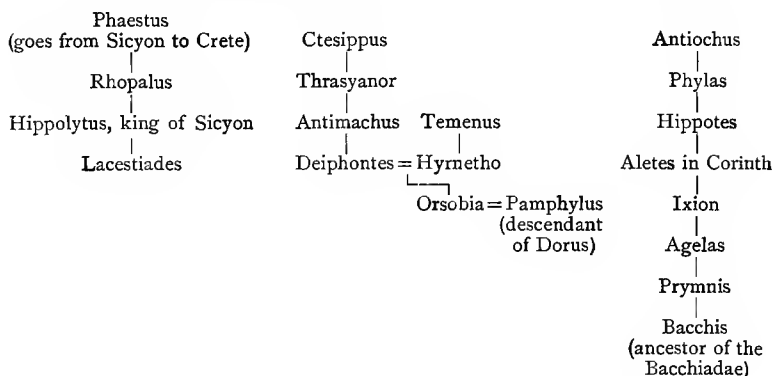
(II)



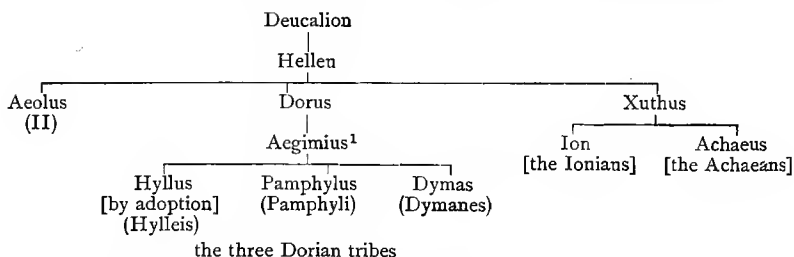
(III)



(IV) Heracleidae (other than the descendants of Hyllus).



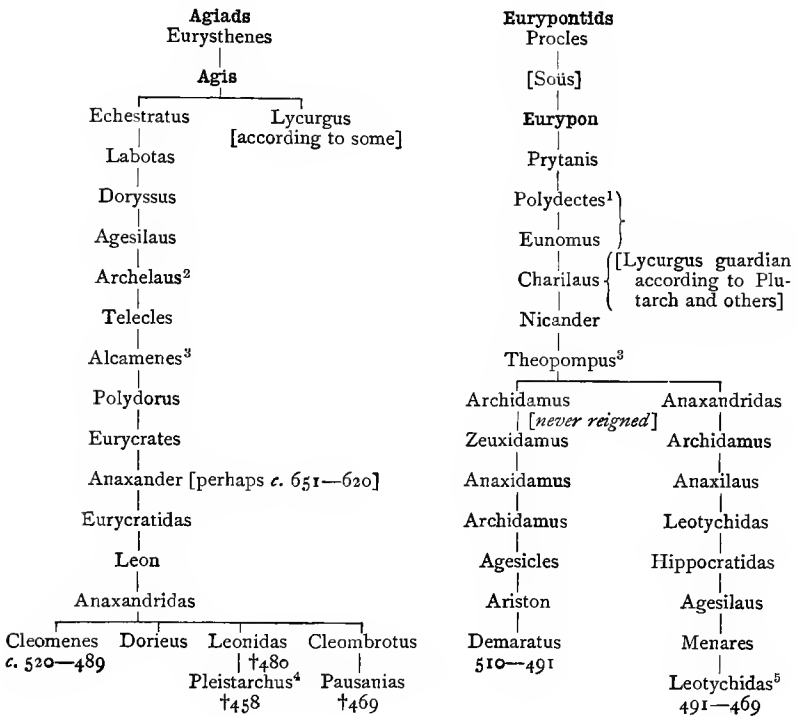
(V) Hesiodic Scheme for combining various Genealogies.



¹ It is doubtful whether any good authorities made Aegimius the son of Dorus, but it is the only way to bring the Heracleidae and Dorian families into the scheme.

(VI) The Kings of Sparta to the Persian Wars.

(Her. VII. 204, VIII. 131.)



¹ So Her. VIII. 131, but Simonides made Eunomus (and Lycurgus) sons of Prytanis, see Plutarch, *Lyc.* 1: and Polydectes is the son of Eunomus in Paus. III. 7. 2. In the conventional chronology of Apollodorus Polydectes is dropped altogether, or identified with Eunomus.

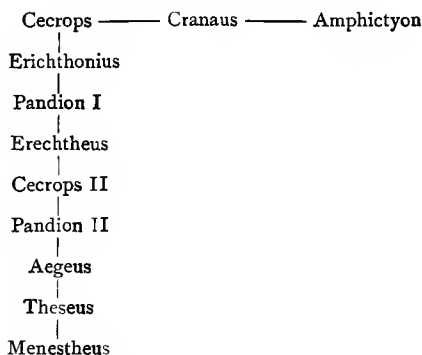
² According to some, a Menelaus reigned between Agesilaus and Archelaus.

³ The first Olympiad, 776 B.C., falls in the tenth year of Alcamenes and Theopompus, according to Apollodorus. But Theopompus is the conqueror of Messenia according to Tyrtæus.

⁴ The remaining Agiad kings are: Pleistoanax 458—445, Pausanias 445—426, Pleistoanax *reinstated* 426—408, Pausanias *reinstated* 408—394, Agesipolis 394—380, Cleombrotus 380—371, Agesipolis II 371—370, Cleomenes II 370—309, Areius I 309—265, Acrotatus 265, Areius II 264—256, Leonidas II 256—243, Cleombrotus II 243—240, Leonidas II *reinstated* 240—236, Cleomenes III 236—223, Eucleidas 236—223, Agesipolis III 221.

⁵ His grandson Archidamus, who succeeded him, took part in the Peloponnesian war and died about 427. The remaining Eurypontid kings are: Agis II 427—399, Agesilaus 399—361, Archidamus III 361—338, Agis III 338—331, Eudamidas I 331—?, Archidamus IV c. 296, Eudamidas II ?—244, Agis IV 244—240.

(VII) Attic Kings.

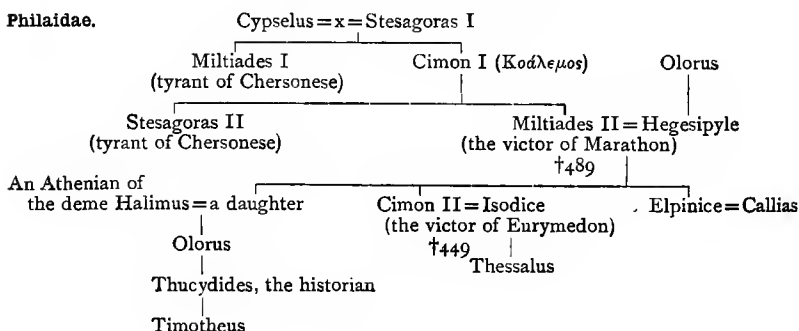


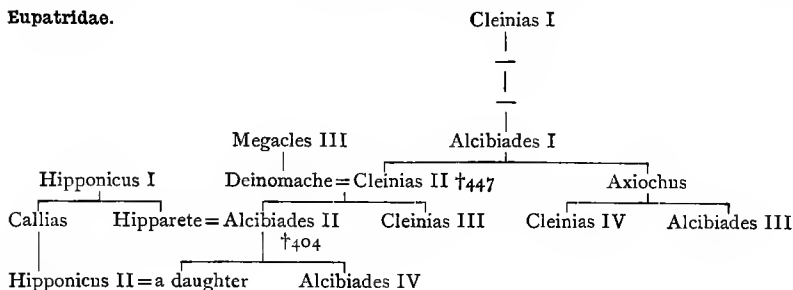
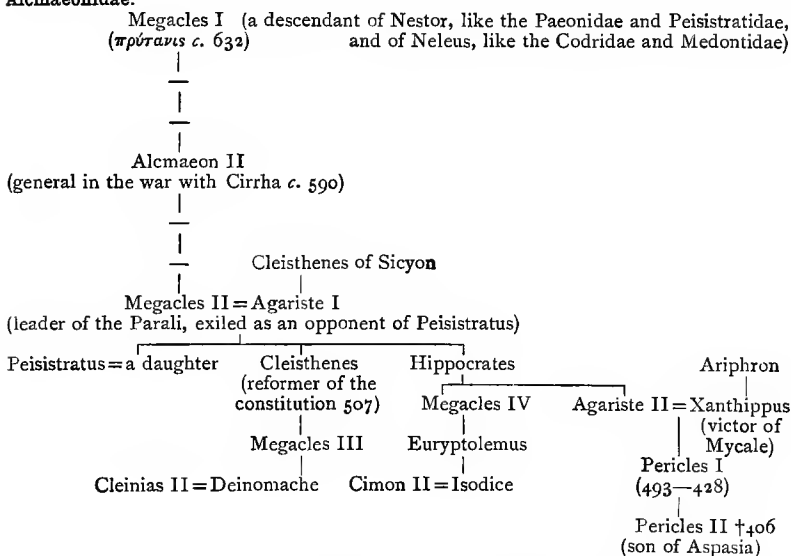
109. The Marmor Parium, an inscription (C. I. G. 2374) which gives dates for various events from the earliest times, places Cecrops 1318 years before 264-3, the archonship of Diognetus, *i.e.* 1582-1 B.C., and makes the capture of Troy fall in the 22nd year of Menestheus, or 1209-8 B.C. The marble follows a scheme of its own, older than, and independent of, Eratosthenes. Philochorus assumed 397 years between Cecrops and the Trojan era, and likewise 397 years between the Trojan era and the accession of the first archon for ten years (752 B.C.), a coincidence which is the key to the construction of the table.

Later accounts, not earlier than Theopompus *circa* 350 B.C., made Cecrops an immigrant from Egypt, but this contradicts the universal belief of older Athens that her people were *αὐτόχθονες*. Cecrops, Cranaus, Pandion and Erechtheus are ancient figures in Attic traditions: the interpolation of Cecrops II, Pandion II, Erichthonius (variant of Erechtheus), which goes back to Hellenicus, was due to chronological requirements.

(VIII) Athenian Families.

Philaidae.



Eupatridae.**Alcmaeonidae.**

110. The account of the Theban, Argive, Spartan and Lydian kings in Herodotus is instructive as illustrating the dependence which historians placed on genealogies. From a comparison of v. 59 with iv. 147, it follows that ten generations elapse from Cadmus to Theras, and Theras arrived in Thera eight generations after Membliares, the Phoenician settler, whose father Poeciles is obviously made to synchronize with Cadmus. Again, seven generations separate Eurystheus and Procles from Amphitryon (vi. 52), who is contemporary with Laius (v. 59). As the Argive list goes back to Acrisius (vi. 53) and the Heracleidae continue to Leotyichidas (viii. 131), a scheme of 26 generations is obtained. In the Agiad royal family indeed there are 27, which is the reason why Ephorus and later authorities inserted another king, Soüs, between Eurypon and Procles; of

whom Herodotus, *l.c.*, knows nothing. But when he gives his own date for the Trojan war as 'eight hundred years before my time' (II. 145) he is at variance with the twenty generations which he allows between Thermopylae and the return of the Heracleidae:—at least if we assume that 20 generations = $666\frac{2}{3}$ years (II. 143), and that between the fall of Troy and the return only two more generations elapsed. At any rate, his date for Heracles is the key to his Lydian chronology: for Agron (I. 7) was the fifth in descent from Heracles, with whom was identified the Lydian Sandon, while Ninus, the father of Agron, is the eponym of Nineveh and the founder of the Assyrian dynasty.

III. All schemes based on genealogies have serious faults: they begin to reckon downwards, from the presumed ancestor, instead of upwards from known individuals: the number of links is not constant, tradition being susceptible of interpolations:

Critical estimate.

the average of a generation is variously computed, as high as 40, or as low as 25 years. The main facts of Greek history, however, are firmly established, and the chronology from the time of the first contemporary historian (*i.e.* from the fifth century) can be ascertained, even with the imperfect means at our disposal, beyond all reasonable doubt. The mere existence of documentary evidence is indeed no guarantee that the facts attested must have taken place. For an inscription may be forged, as that bearing the names of Iphitus and Lycurgus upon the quoit at Olympia, or those seen by Herodotus (v. 59—61) upon tripods in the temple of Ismenian Apollo in Thebes. Or part only of a record may be historical. Thus there is an extant inscription, itself a copy of an earlier record, which enumerates the priests of Poseidon at Halicarnassus, with the years of their priesthood, from the foundation of the colony, beginning with Telamon, son of Poseidon, the first of sixteen names covering 504 years (C.I.G. 2165, Dittenberger, *Sylloge*² 608). Even the valuable register of the Olympic victors, which goes back to 776 B.C., has not escaped suspicion. It was first published by Hippias of Elis, the famous sophist, in the fourth century. A similar list of the victors in the Carnean festival at Sparta from Ol. 26, 676 B.C., had previously been published by Hellanicus. What Hippias did was perhaps to reconstruct the Olympic register for the oldest time from such material, monumental or traditional, as he could find: at least this was the opinion of certain authorities known to Plutarch, *Numa* 1: τῶν Ὀλυμπιονικῶν...ὄν τὴν ἀναγραφὴν ὀψέ φασιν Ἰππίαν ἐκδοῦναι τὸν Ἡλείον ἀπ' οὐδενὸς ὀρμώμενον ἀναγκαίου πρὸς πίστιν. Hence the necessity of submitting the materials to a rigorous criticism, a necessity fully recognized by Thucydides, the greatest of Greek historians. His conception of historical research may be gathered from the sketch of the earlier period (I. 1—23) which he has prefixed to his history. When the details can no longer be recovered we must be content, like Thucydides, with a general outline of social progress, to which inferences from institutions of a later time contribute no less than the critical treatment of tradition. If we are

now at all in advance of Thucydides it is in the recognition that much which passes for tradition is really the product of reflexion, the direct invention of a later and uncritical age, and in the assistance rendered to history by archaeology and the science of language.

112. The racial origin of the Greeks is discussed elsewhere (§§ 31 ff.). The Greeks themselves believed in the unity of their race and appealed to their common language, religion, and culture (Herod. VIII. 144). From an early time they recognised a division of the race into Aeolians, Ionians, and Dorians. This classification probably arose in Asia, as it best accords with the distribution of the Asiatic colonies. Hesiod's eponymous table of Hellen and his sons takes in the Achaeans as well: Table (V) § 108. Obviously these four must have seemed the most important branches of the Greek race at the place and time at which the table was constructed. For further evidence see Chapter VIII. 1.

Divisions of
Greek stock.

Partly from disparity of endowments, partly from their surroundings, the branches of the Greek race had a very unequal development. The splendid civilization of the Minoan and Mycenaean ages was overthrown by an irruption of hardy invaders from the north. Subsequently Aeolian and Ionian immigrants made extraordinary progress in Asia, while European Greece was still backward and unenterprising: in the historical centuries the contrast is as striking between the great commercial centres at home and in the colonies, whether Ionian, Dorian, or Achaean, and the rude half-civilized tribes of the north and north-west, which do not emerge from obscurity until Macedonian times.

113. Thucydides (I. 3) has pointed out the late and gradual application of the national name Hellenes in contrast to the name Barbarians for foreigners. In Homer, the Hellenes are merely the subjects of Achilles from Phthiotis in southern Thessaly: the terms Danaans, Argives, and Achaeans, more nearly approximate to a national designation. The term Graeci itself, by which the race was known in Italy, was a traditional name of the Hellenes when settled about Dodona in Epeirus (Arist. *Meteor.* I. 14, 35^{2b} 2).

Common
names for the
Greeks.

114. Thucydides (I. 2 sqq.) with wonderful insight has depicted the primitive state in most parts of Greece as analogous to that of barbarians, or the most backward Greek tribes, of his own day: there were constant migrations, arms were carried, life and property insecure, trade and free intercourse almost unknown. The prehistoric invaders must have been nomads not unacquainted with agriculture, weaving, and metal working, but fond of the chase, and depending mainly for sustenance upon their flocks and herds. They had a highly-developed system of family relationship, which was the basis of their clans and tribal organization. As the new settlers advanced from the pastoral stage to the agricultural, and from that to trade and commerce, these conditions gradually improved. The pressure of narrow limits checked the nomadic

Settlement.

instinct: the physical configuration of Greece tended to break up the larger hordes into a multitude of isolated tribes, who settled down, clan by clan, and family by family. They first lived in 'village fashion,' of which traces remained throughout the historical period (*e.g.* Sparta and almost all the north-west of Greece). Cities grew up (1) by the clustering of a dependent population round a stronghold or citadel (*πόλις, πολίεθρον*) as at Mycenae, Athens, Thebes, and (2) by the amalgamation of the village population at a common centre. The change to a stationary existence gave rise to private property in land: but the older system of common pastures and rotation of ploughed lands left many survivals (*e.g.* the common meals of Crete and Sparta, the peculiar legislation in Leucas, Sparta and elsewhere on the alienation of land,—even the word *κλήρος* itself for an allotment). Piracy itself attests increasing familiarity with the sea, and Minoan pottery, found all over the Aegean, reflects the beginnings of home manufacture and export trade.

115. The evidence of archaeology shows the wide diffusion of a highly developed civilization in Crete and the Aegean Islands and on the mainland of Greece (see §§ 283 ff.). The bronze age in Crete has been divided into three main 'Minoan' periods, Early, Middle, Late, and each of these periods has three subdivisions. The chief stages in the development are given in the following table, in which the dates must be regarded as only approximate. The traditional dates of legendary Greek history are appended:

THE EARLIEST HISTORY OF THE AEGEAN.

Approximate Dates B.C.	Crete	Greece, the Aegean Islands and Asia	Evidence from Egypt and elsewhere
STONE AGE From the earliest times to c. 3400	Neolithic civilization showing continuous development		Analogies with Neolithic pottery in Egypt Italy
BRONZE AGE Early Minoan i (Sub-neolithic) c. 3400—2800 ii 2800—2400 iii 2400—2200	Progress in house building and the crafts Development of native art Pictorial and linear signs	Troy (second city) and the Cyclades in contact with Crete	Egyptian influence Crete
Middle Minoan i 2200—2000 Hieroglyphic Script A	First palaces at Cnossus and Phaestus Polychrome ware		
ii 2000—1750 Hieroglyphic Script B	First climax of Minoan civilization Polychrome ware c. 1750 Palaces at Cnossus and Phaestus destroyed		Minoan ware found Egypt (c. 1850—1750 B.C.) Early XIIIth Dyn. Monument at Cnossus M. M. ii. stratum

Approximate Dates B.C.	Crete	Greece, the Aegean Islands and Asia	Evidence from Egypt and elsewhere
i 1750—1580	Later Palaces of Cnossus and Phaestus built First villa at Aghia Triada Height of civilization and power Linear script A Faience figures c. 1580 Partial catastrophe at Cnossus	Aegean remains uniform Cretan influence dominant in Cyclades may point to domination of Crete in Aegean (Thuc. I. 4) Traces of Cretan culture on mainland of Greece	
Late Minoan i 1580—1500	Rebuilding of Palace at Cnossus begun First Palace at Aghia Triada Later Palace of Phaestus destroyed	Rise of Mycenae and other cities on mainland	
ii 1500—1400	c. 1500 Golden Age of Crete Later Palace of Cnossus re-modelled Linear script B Before 1400 decline of power Palace of Cnossus destroyed Collapse of power of Cnossus (?)	Bronze age culture dominant in Greece, reaches Thessaly	In reign of Thothmes III Cretan vases represented on Egyptian monuments, 'work of <i>Keftiu</i> ' (= Creteans?) brought with tribute from Cyprus 1467 B.C.
iii 1400—1200	Minoan culture at first not interrupted Partial re-occupation of Cnossus, Aghia Triada, etc. From c. 1350 age of stagnation and decline in power and art Possible invasion of Northern races (?)	Supremacy transferred to cities of mainland (?) Power and wealth of Troy (sixth city) Destruction of 'Mycenaean' civilization towards end of period, due to invasion of Northern races (?)	Uniform culture widely spread over Mediterranean area. Mycenaean pottery at Tell-el-Amarna c. 1380 Egyptian Records c. 1295 B.C. Rameses II defeats <i>Kheta</i> , <i>Dardenui</i> , <i>Masa</i> , <i>Luka</i> , <i>Qalagisa</i> c. 1230 Menepthah defeats Libyans in alliance with <i>Akaiwasha</i> , <i>Tursha</i> , <i>Luka</i> , <i>Shardina</i> , etc. 'Northerners from all lands' c. 1196 'The isles were restless.' Rameses III defeats <i>Kheta</i> with allies including <i>Pulesatha</i> , and <i>Daanau</i>
IRON AGE Gradual Transition down to 1000 (?)	Overthrow of Minoan civilization	Trojan war Homeric age	

TRADITIONAL DATES OF LEGENDARY GREEK HISTORY

1466 Danans
1433 Deucalion
1406 Minos I
1313 Cadmus
1283 Pelops
1261—1209 Heracles
1235 Theseus

1229 Minos II
1225 Voyage of Argonauts
1213 First Theban War
1198 Second Theban War
1192—1183 Trojan War
1176 Colonies in Cyprus

1124 Thessalian and Boeotian migration
1104 Dorian migration
1074—1066 Dorian Colonies
1054—1015 Aeolian Colonies
1044 Ionian Colonies

116. Many invasions and displacements of earlier populations were dimly remembered in ancient Greece. The Dorians were always proudly conscious that they were a handful of invaders in Peloponnesus, holding down alien subjects by main force (Tyrtæus, *Fr.* 2). Homer tells of Dorians in Crete (*Od.* xix. 177), but ignores them elsewhere; the times he is describing are anterior to the movements which determined the distribution of the population in historical Greece. In the tradition three invasions appear to be distinguished. (1) The Thessalians of historical times, coming from Thesprotia, conquered the country to which they gave their name, and the Boeotians, expelled by the Thessalians 'from Arne,' occupied the country called after them Boeotia. (2) The Dorians issued from northern Greece, overran Argolis, Laconia and Messenia, and colonized by sea Crete, Thera, Melos, Rhodes, Cos, Cnidus. This is the **Dorian migration**. (3) North-western Greece—Locris, Phocis, Aetolia, Acarnania—was overrun by invaders from Epeirus, part of whom crossed the sea into Iapygia, while an advanced guard seized Elis. The first two of these movements Thucydides (i. 12), following some accepted chronology, places 60 and 80 years respectively after the fall of Troy.

117. With these migrations the legends connect the first great wave of Greek colonization, by which the shores and islands of Asia Minor were overspread. The **Aeolian migration** is the establishment of settlers in Lesbos, Tenedos, and on the Mysian mainland under oecists (Gras, Penthilus, Cleuas and Malaus) who were said to be descendants of Agamemnon. Yet in historical times the affinities of the Aeolian and Lesbian cities lay rather with Boeotia and Thessaly. Next, according to the legend, came Ionians, originally the inhabitants of Aegialea, *i.e.* the later Achaia, in north Peloponnesus. They started, however, from Attica, and the most famous oecists, Neleus and Androclus, were sons of Codrus, tracing descent (like some of the Attic nobles) to Nestor. This is the **Ionian migration**, which occupied Chios, Samos, the Cyclades, and the central part of the Lydian and Carian coast of Asia Minor. Dorians again at various times settled in Crete, Thera, Melos, Rhodes, Cos, and on the Carian coast at Cnidus and Halicarnassus.

Earlier still in the traditional account were settlements on the Pamphylian coast at Aspendus, Perge, Selge, the oecists being heroes returning from the Trojan war:—in Cilicia, at Soli, Tarsus and Mallus, and at many points in Cyprus, the oecist of Paphos being Agapenor, an Arcadian. As the Cypriotes used a syllabary, their colonies were at any rate older than the introduction of alphabetic writing into Greece.

The standard work on the astronomical basis of chronology is L. Ideler, *Bibliography.* *Handbuch der mathematischen und technischen Chronologie*, 2 vols., 1825/6, reprinted 1883; H. Fynes Clinton, *Fasti Hellenici*, 3 vols.,

1834/51 (3rd edition of Vol. II., 2nd edition of Vol. III.), needs revision. For a detailed bibliography see A. Schaefer, *Abriss der Quellenkunde der griechischen und römischen Geschichte, Erste Abtheilung, griechische Geschichte bis auf Polybios*, 4th edition, 1889, a good summary of the literary sources. For subsidiary sources consult E. L. Hicks, *Greek Historical Inscriptions*, 2nd edition, 1901, and G. F. Hill, *Sources for Greek History between the Persian and Peloponnesian wars*, 1897. As to the data of the literary chronology, see H. Diels, *Chronologische Untersuchungen über Apollodors Chronika in Rheinisches Museum*, Vol. XXXI., 1876, p. 1 ff., W. F. Wislicenus, *Astronomische Chronologie*.

II 2. CHRONOLOGICAL TABLES.

A. THE EIGHTH AND SEVENTH CENTURIES B.C.

118. THIS period is marked (1) by the growth of commerce and the foundation of colonies, especially in the Euxine and the west; by the rise of commercial cities—Miletus preeminently, other Ionian cities, Chalcis, Eretria, Aegina, Corinth. Eighth and seventh centuries B.C. (2) Agriculture is still the staple industry, but is beginning to be supplemented by manufactures, as of woven cloth, pottery, armour. The coining of money is adopted from Lydia and quickly spreads all over Greece, working an economic revolution. The commercial rivalry of the Phoenicians in the eastern Mediterranean tends to abate. Egypt, now reviving under native rule (664), is at last open to Greek trade. (3) The constitution, once monarchy, has at the outset of this period in most cities become the rule of privileged noble families, which again is often overthrown, as trade and wealth increase, by a popular leader or 'tyrant.' (4) In Peloponnesus two military and agricultural states are conspicuous: **Argos**, long preeminent, subsequently to decline before the growing strength of **Sparta**, a state organized exclusively for war, which succeeds in conquering and holding down Messenia. (5) In intellectual progress the Ionians are the leaders. Writing began in Ionia; through Homer Ionic becomes the literary dialect. Along with the epic, various branches of lyric poetry flourish:—elegy, iambus, melos, and the choral ode.

There are scarcely any contemporary records. Of the dates preserved by tradition, more than half concern the foundations of cities (*κτῖσεις*), sometimes conflicting, sometimes precise and consistent, as for Sicily (Thuc. vi. 1—4). The traditional data in the case of the Sicilian colonies must have been combined and harmonized by a systematizer, probably Antiochus of Syracuse. For the affairs of Asia Minor, Assyrian monuments (presumably contemporary) afford some aid. Thus Gyges, king of Lydia, appears on an inscription as a vassal of Assurbanipal about 660. Hence the date assigned to him by Herodotus, 716—678, must be given up. This affects the dates of some early poets (Callinus, Archilochus, Semonides) and of certain colonies which are vaguely referred to 'the times of Gyges.'

The principal Greek Colonies before the Persian War.

In the west (Italy and Sicily).

- ? Cyme¹ (Cumaë) in Italy founded by Chalcis and Euboëan Cyme
Parthenope (Neapolis) by Rhodes
- 735 Naxos in Sicily by Chalcis and Naxos
- 734 Corcyra by Corinth, expelling earlier Eretrian settlers
- 734 Syracuse by Corinth (757 Parian Marble)
- c. 730 Zancle by Cyme in Italy and Chalcis (757 Eusebius)
- 729 Leontini and Catana by Naxos in Sicily
- 728 Megara Hyblaea by Megara after a first settlement at Thapsus
- 721 Sybaris by Achæans and Troezen
- c. 717 Mylæe by Zancle and Rhegium by Chalcis
- 710 Croton by Achæans
- 708 Tarentum by Parthenii from Laconia
- c. 700 Metapontum by Sybaris; Siris by Colophon; Locri Epizephyrii by Locrians; Caulonia by Achæans; Poseidonia (Paestum) by Troezenians expelled from Sybaris
- 689 Gela by Rhodes and Cretans
- 664 Acrae by Syracuse
- 649 Himera by Zancle
- 648 Selinus by Megara
- 644 Casmene by Syracuse
- 625-585 Ambracia, Leucas, Anactorium, Sollium, Apollonia, Epidamnus by Corinth
- 600 Massalia by Phocæa
- 599 Camarina by Syracuse
- 581 Acragas by Gela
- 579 Lipara by Cnidus and Rhodes (after a futile attempt to settle at Lilybaeum)
- 668 Alalia in Corsica by Massalia. (Other colonies of Massalia: Olbia, Antipolis, Nicaea, Agathe, Portus Monoeci, Rhoda, Emporiae, Alonae, Artemisium, and the most westerly Greek settlement Maenace.)
- 543 Hyele (Elea) by Phocæans expelled from Alalia

In the north-east (Propontis and Euxine), the Aegean, and the south-east (Egypt and Cyrene).

- 770 Sinope by Miletus (re-founded after the Cimmerian invasion 631)
- 757 Cyzicus by Miletus (re-founded 676)
- 756 Trapezus by Miletus or Sinope (Cotyora and Cerasus by Sinope)
- 750-650 Many towns on the Thracian peninsula of Chalcidice (Torone by Chalcis; Mende by Eretria; Scione by Achæans of Pellene; Acanthus(654), Stagirus(654), Argilus, Sane by Andros; Galepsus and Oesyne by Thasos)
- 712 Astacus by Megara
- 710 Parium by Miletus and Erythrae
- 696-2 Amorgos by Samos
- 689 Phaselis by Rhodes
- 677 Chalcedon by Megara
- c. 680 Thasos by Paros
- 675 Abydos by Miletus
- c. 670 Selymbria by Chalcedon
- 660 Byzantium by Megara
- 656 Istrus and Tyras by Miletus
- c. 655 Acanthus, Stagirus, Argilus in Chalcidice by Andros
- 654 Abdera by Clazomenae (re-founded by Teians 545)
- 653 Lampsacus by Phocæa
- c. 650 Milesian factory on the Bœlbœnitic arm of the Nile
- 647 Olbia (Borysthenes) by Miletus
- 633 Cyrene by Thera (Apollonia, its port)
- 601 Perinthus by Samos
- c. 600 Panticapæum and Theodosia in the Crimea by Miletus
- c. 585 Tomi, Odessus and Apollonia in the Pontus by Miletus
- before 585 Potidaea by Corinth
- 570 Naucratis (Miletus, Samos, Aegina and numerous cities were represented in the Hellenion)
- 560 Amisus by Phocæa
- c. 550 Barca by Cyrene (also Teucheira and Euesperides)
- c. 545 Phanagoreia by Teos
- 538 Heracleia in the Pontus by Megara (and Boeotians)
- 510 Mesambria by Chalcedon and Megara

¹ The date given by Jerome, 1052, rests on a confusion with the Aeolian Cyme. Strabo makes it the oldest Greek city in Italy or Sicily, and this statement may come from Ephorus.

Civil Events¹

Literature and Art

- 776/5 Ol. I. 1 Coroebus, the first victor in the stadium at Olympia whose name is recorded.
- 752/1 Ol. 7. 1 Decennial archons at Athens.
- 748/7 Ol. 8. 1 Pheidon, king of Argos, is said by Pausanias to have held the Olympic festival. (Herodotus says that he introduced the 'Pheidonian measures,' i.e. the Aeginetan standard. Ephorus attributed to him the first coining of money.)
- 744 *Tiglath-Pileser II, king of Assyria, at this time the greatest power in the East* (—727).
- c. 725 Ol. 13. 4 The first Messenian war. In the twentieth year the Spartans under Theopompus enslave or expel the Messenians (Tyrtæus).
- 720 Ol. 15. 1 *First Assyrian invasion of Egypt by Sargon, the conqueror of Samaria.*
- 709 *Seven Cyprian princes do homage to Sargon.*
- 704/3 Ol. 19. 1 Ameinocles of Corinth builds triremes for the Samians.
- c. 700 Ol. 20. 1 War between Chalcis and Eretria for the Lelantine plain: Samos, Miletus and other cities take sides.
- 693 Ol. 21. 4 *Midas, king of Phrygia, dies by his own hand in the Cimmerian invasion of Asia Minor.*
- 683/2 Ol. 24. 2 Nine annual archons at Athens.
- 681 *Esarhaddon* (—668). *The Assyrians in his reign conquer Egypt which is held by twenty vassal princes.*
- 679 *Esarhaddon defeats the Cimmerians under Tiushpa.*
- 670/69 Ol. 27. 3 Orthagoras tyrant of Sicyon (his family rules for 100 years).
- 669/8 Ol. 27. 4 The Argives defeat the Spartans at Hysiac, Paus. II. 24. 8: Cynuria remains Argive.
- 664/3 Ol. 29. 1 Sea fight between Corinth and Corcyra. *Accession of Psammetichus I, an Egyptian vassal prince, who with the aid of Greek and Carian mercenaries in time shakes off the Assyrian yoke* (—610).
- 660 *Gyges, king of Lydia* (c. 680—660), *becomes a tributary of Assyria.*
- 660/59 Ol. 30. 1³ Zaleucus, legislator of (the Italian) Locri: author of the oldest written code.
- 657/6 Ol. 30. 4 *Sardis taken by the Cimmerians.* About this time the Ephesian temple of Artemis burnt by the Cimmerians and Magnesia on the Maeander destroyed by the Treres.
- Epic poetry flourishes.**
- 776² Arctinus of Miletus: the *Aethiopsis* and the *Sack of Troy*.
- 765² Cinaethon of Lacedaemon: genealogical poems; *Heracleia* and *Oedipodeia* also ascribed to him by some.
- c. 750—700 Olympus, the founder of Greek music, composer for the flute (i.e. clarinet).
- 740² Eumelus of Corinth: *Corinthiaca*, *Europia*, and *Bugonia*. Other early epics; the *Cypria* (attributed to Stasinus or Hegesias), the *Returns* (*Nórooi*) of the heroes from Troy (said to be the work of Agias of Troezen), the *Thebais* and *Epigoni* dealing with Theban legends.
- c. 690 Callinus of Ephesus, the earliest elegiac poet (he refers to the Cimmerian invasion).
- 676/5 The Carnean festival at Sparta at which Terpander is victorious. The introduction of the seven-stringed lyre attributed to him.
- c. 670 Floruit Archilochus⁴ of Paros, one of the colonists of Thasos: elegiac and iambic poet. Mentions an eclipse of the sun, i.e. April 6, 648.
- c. 665 Thaletas of Gortyn in Crete: lyric poet and musician.

¹ Foreign events are printed in italics.² On what data, or combinations, these figures of Eusebius rest is not known.³ Either in the 26th, 28th or 30th Olympiad the Pisatans are said to have wrested the festival from Elis and retained it 'many years.'⁴ The Parian Chronicle gives 681, Eusebius 665, as the ἀκμή of Archilochus.

Civil Events

Literature and Art

- 655/4 Ol. 31. 2 Cypselus, tyrant of Corinth (—625).
- 648/7 Ol. 33. 1 Myron, tyrant of Sicyon, victor in the chariot race at Olympia.
c. 646 *Ardys, king of Lydia* (called Alyattes by Xanthus), a vassal of Assyria. His reign perhaps 652—615.
- 644/3 Ol. 34. 1 The Pisatans under King Pantaleon held the Olympic festival.
- 640/39 Ol. 35. 1 Cylon of Athens victor at Olympia¹. About this time Charondas legislator of Catana.
c. 640 The second Messenian war, in which Aristomenes took part².
- 631/0 Ol. 37. 2 Voyage of Colieus the Phocæan to Tartessus.
 626 *Death of Assurbanipal* (Sardanapalus). *Babylon recovers independence.*
- 625/4 Ol. 38. 4 Periander, tyrant of Corinth (Theagenes, tyrant of Megara, and Procles of Epidaurus his contemporaries).
- 621/0 Ol. 39. 4 Draco's written code at Athens.
c. 620 *The Scythians* (Sacaæ) invade Asia and weaken the Assyrian empire.
 615 *Sadyattes, king of Lydia* (—604). He attacks Miletus but ultimately makes peace with its tyrant Thrasybulus.
- 612/1 Ol. 42. 1 Pittacus overthrows Melanchrus tyrant of Mytilene.
 610 *Necho becomes Pharaoh.*
 War between Athens and Mytilene for the possession of the Troad. Pittacus slays Phrynon in single combat.
 606 *Fall of Nineveh.* *It was captured by Cyaxares the Mede and the Babylonian Nabopolassar.*
 605 Alyattes, king of Lydia (—560). He continues to encroach on the Greek cities.
 604 *Nebuchadnezzar* (—562).
- c.* 650 *The Little Iliad* (ascribed to Lesches of Lesbos) and the *Heracleia* (to Peisander of Rhodes).
 Also the earlier Homeric hymns (*προοίμια*): e.g. to the Delian Apollo and to Demeter.
 640 Fl. Semonides² of Amorgos, iambic poet and satirist.
c. 640—623 Fl. Tyrtaeus of Aphidna, elegiac poet, who inspired the courage of the Spartans in the second Messenian war.
 639 Birth of Solon.
 Alcman (born at Sardis) migrated to Sparta where he composed hymns and pæans in Doric.
c. 630 The chest of Cypselus dedicated at Olympia (described by Pausanias v. 17—19).
c. 620 Mimnermus of Colophon flourished, elegiac poet: contemporary of Sadyattes³: mentions the defence of Smyrna against Gyges.
 Rise of Melic poetry; introduction of new lyric metres. In Lesbos flourished Alcaeus, a leader in the opposition to Myrsilus the tyrant, and afterwards to Pittacus, author of *στασιωτικά* and *συμποτικά* (*c.* 610—595):
 Sappho, famous for love poems and epithalamia (*c.* 610—565): and
 Erinna, a minor poetess in the school, or circle, of Sappho.
c. 600 Arion of Methymna introduced 'cyclic choruses' (contemporary with Cypselus).

B. THE SIXTH CENTURY B.C.

119. (1) The Ionians reach the last stage of their development and begin rapidly to decline. All the Asiatic Greek cities pass under the protection of Croesus; they entirely lose their independence to the Persians. In spite of the destruction of Smyrna and the emigration of the Phocæans, material prosperity is as yet hardly impaired. (2) Further advance is made by the commercial cities.

Sixth century.

¹ In a subsequent Olympic year (636, 632 or 628) Cylon attempted, by seizing the Acropolis, to make himself tyrant of Athens. His followers were massacred after surrendering and the Alcmaeonidae were tried and condemned for this breach of faith.

² The Parian Chronicle gives 665, Suídas 640—610, as the ἀκμή of Semonides.

³ The date adopted by Pausanias is 685—668. But, according to Plutarch (*Apophthegm. Epam.* 23), the restoration of Messene in 369 by the Thebans was 230 years after the conquest of the country.

The growth of manufactures and the introduction of a currency bring economic evils in their train; loans, usury, mortgages and slavery for debt. These evils favour the rise of tyrants and occasionally of lawgivers (*αἰσυνυῆται*): but at the end of the century the tyrants have all been deposed—except in Sicily and within the limits of the Persian empire. (3) The military state, Sparta, now at the head of a Peloponnesian confederacy, claims a vague headship of Greece and occasionally remonstrates with powers outside Peloponnesus. Argos is humbled, but Athens steadily increases in power. The Spartans about 600 B.C. are not yet stereotyped, but fresh and vigorous, in touch with foreigners; a people fond of poetry, musical contests and art. (4) To epic and lyric poets must now be added the Ionian philosophers and prose writers, gnomic poets and fabulists, with the beginnings of tragedy. This century also saw the rise of plastic art in bronze and marble, and the foundation of the most archaic temples.

Herodotus, though writing *c.* 430, is the one invaluable and primary authority for this century. Additional information can be gleaned from the fragments of other historians and from Aristotle *On the Constitution of Athens* (of date 329 B.C.).

*Civil Events**Literature and Art*

- 595/4 Ol. 46. 2 **The first Sacred (or Cirrhaean) war** (—586/5), in which Cleisthenes of Sicyon and Solon took part¹.
- 595 *Psammetichus II* (—589). The Abu-Simbel inscription (Hicks, *G. H. I.* no. 3) by some of his mercenaries.
- 594/3 Ol. 46. 3 **Legislation of Solon.**
- 590/89 Ol. 47. 3 Pittacus, aesymnetes of Mytilene. (Resigns 580, dies 570.)
- 589 *War between Lydia and Media* (ended by the eclipse of May 28, 585).
- 584 *Astyages, king of Media* (—550).
- 582/1 Ol. 49. 3 Damasias, archon at Athens, in power for two years and two months. First Pythiad². The institution or restoration of the Nemean games.
- 581/0 Ol. 49. 4 Psammetichus, the last tyrant of Corinth, expelled.
- c.* 580 Civil strife at Miletus for two generations (—540).
- The Sculpture of this century represented by the metopes of Selinus (? 600—580), the Apollo of Tenea and of Thera, the archaic female statues on the Acropolis. Architecture by the temples of Selinus. The Artemisium at Ephesus rebuilt (Chersiphron of Gnossus).
- 596 Banishment of the Lesbian nobles: Alcaeus goes to Egypt (his brother Antimenides serves under Nebuchadnezzar), Sappho to Sicily.
- 592 'Stesichorus' of Himera (*c.* 610—550). He perfected the choral song with strophe, antistrophe, epode: chose epic subjects for lyric treatment.
- 582—78—74 Sacadas, poet and musician, victor with the 'flute' in the first three Pythiads.
- 580 Rise of the Ionian school of natural philosophy. Thales of Miletus (*c.* 624—546) astronomer and physicist (*φυσιολόγος*).
- 580/76 Dipoenus and Scyllis, Cretan sculptors, employed

¹ Thus the Amphictyony of Pylae must date from at least the seventh century.

² So the scholiast on Pindar, confirmed by the Marmor Parium and the table of Olympic victors in the *Oxyrhynchus Papyrus*, Vol. II, n. ccxxii. Cf. *ib.* pp. 85, 92. Others reckon the Pythiads to commence with 586 as the first, Pausanias x. 7. 3.

³ Hence referred by Suidas to Ol. 37, 632/23.

Civil Events

Literature and Art

- 575/4 Ol. 51. 2 Smyrna destroyed by Alyattes.
 572/1 Ol. 52. 1 Phalaris, tyrant of Acragas.
 570 *Rise of Amasis, Apries dethroned.* Egypt thrown open to Greek trade. Cyprus conquered by Egypt. Between 570 and 565 Nisaea captured by Peisistratus.
- 566/5 Ol. 53. 3 Games instituted at the Panathenaea.
 561/0 Ol. 54. 4 Peisistratus tyrant of Athens. Expelled 'not long afterwards.'
 560 Croesus, king of Lydia (—546). All Greek cities on the mainland reduced to dependence.
c. 560 Tegea acknowledges the Spartan hegemony (Cheilon ephor 556).
 553 *Cyrus revolts from allegiance to Astyages.*
- 553/2 Ol. 56. 4 Camarina destroyed by Syracuse. (Not recolonized until 493/2.)
 551/0 Ol. 57. 2 Peisistratus for a short time again tyrant, but, after a rupture with Megacles, expelled.
 550 *Overthrow of the Median empire by Cyrus.*
- 548/7 Ol. 58. 1 The temple at Delphi burnt.
 547 *Spring. Cyrus sets out on an expedition against Lydia*¹.
 546/5 Ol. 58. 3 **Capture of Sardis.** *The Lydian kingdom absorbed in the Persian empire.*
 545 *Spring.* The Argives defeated by the Spartans: Thyreatis conquered. Reduction of the Asiatic Greeks and the islands by Harpagus, the general of Cyrus. Bias of Priene advises emigration to Sardinia.
- 544/0 Ol. 59 The Phocaeans, driven from Ionia, settle first at Alalia in Corsica and then at Elea (Velia) in south Italy.
- 539/8 Ol. 60. 2 Return of Peisistratus 'in the eleventh year' of his exile².
 538 *October. Babylon taken by Cyrus.*
- upon marble and ebony statues at Sicyon, Cleonae, Argos.
 Archermus of Chios famous for the oldest marble statues in Delos or Lesbos.
 Solon (*c.* 639—559) elegiac poet. One of the *Seven Wise Men* (with Thales, Pittacus, Bias of Priene, Cheilon, Cleobulus of Lindus, and Myson of Chen, for whom Periander was substituted by others).
 568/4 The *Telegonia*, an epic poem ascribed to Eugammon of Cyrene.
 566 Glaucus of Chios fl., inventor of the process for welding iron: he moulds the stand for the mixing bowl sent by Alyattes to Delphi.
 Anaximander of Miletus fl., pupil of Thales, geographer and map maker. Wrote *On Nature*.
 566 Pherecydes of Syros (*c.* 596—540) fl. Said to have been the teacher of Pythagoras of Samos. His treatise Ἐπτάμυχος partly a theogony, partly philosophical.
 560 Aesopus fl. A slave, who invented the type of fable in which animals act. Lived at the court of Croesus.
 Bathycles of Magnesia fl. He wrought the reliefs on the throne of Apollo at Amyclae. Statues of victors first erected at Olympia (Ol. 59).
c. 540 Hipponax of Ephesus fl., author of bitter lampoons in scazons, *i.e.* limping iambics.
 540 Anaximenes of Miletus, pupil and successor of Anaximander, fl.
 540/36 Phocylides of Miletus, gnomic poet: author of political and moralizing elegiacs.
 536/2 Pythagoras of Samos fl. Migrating to Croton in Italy, in order to escape from Polycrates, he there founds a political and religious order: becomes distinguished as mathematician and physical philosopher.

¹ This date, which practically determines that of the fall of Sardis, is from a cuneiform inscription.

² There is a discrepancy in the authorities between the sum of the separate items and the total length (17 years) which they assign to Peisistratus' tyranny.

Civil Events

Literature and Art

- 533/2 Ol. 61. 4 Polycrates, tyrant of Samos, master of the sea.
529 *Cambyses succeeds Cyrus on the Persian throne.*
- 527/6 Ol. 63. 2 Hippias succeeds Peisistratus.
525 *The Persians conquer Egypt.*
- 524/3 Ol. 64. 1 A Spartan expedition against Polycrates unsuccessful. The Etruscans attack Cumae without success.
522 *Death of Cambyses. The false Smerdis, a Magian, reigns for seven months, but is deposed and slain.*
521 *Darius, son of Hystaspes, becomes king, and suppresses various revolts in the provinces (521—519). He organizes the satrapies of the empire.*
- 520/19 Ol. 65. 1 Cleomenes, king of Sparta (—489).
- 519/8 Ol. 65. 2 Plataea, by the advice of Cleomenes, seeks protection from Athens, 93 years before its destruction.
517 *Conquest of Barca by the Persians.*
514 *Scythian expedition of Darius. Megabazus subsequently reduces Thrace and Macedonia. Histiaeus returns with Darius to Susa.*
- 514/3 Ol. 66. 3 Murder of Hipparchus by Harmodius and Aristogeiton at the great Panathenaea (28th of Hecatombaeon, 514).
- 511/0 Ol. 67. 2 Destruction of Sybaris by Croton.
510 *Spring.* Harpactides archon. Expulsion of Hippias by the Spartans under Cleomenes. Hippias is settled at Sigeum.
c. 510 The Carthaginians expel a Spartan colony under Dorieus, half brother of Cleomenes, from the Cinypts in Libya.
- 508/7 Ol. 68. 1 Isagoras archon.
507 *Spring.* Cleomenes at Athens: he expels 700 families, but fails to overthrow the Council. After his departure Cleisthenes and his adherents are recalled. **Cleisthenes reforms the constitution of Athens, creating new local tribes with the trittyes and demes.** Athens applies to Artaphrenes, satrap of Sardis, for protection.
- 507/6 Ol. 68. 2 Alcmaeon (?) archon.
506 *Spring.* Peloponnesian invasion of Attica. Owing to Corinthian opposition and dissension between the kings, Cleomenes and Demaratus, the army retires. The Athenians defeat the Thebans and Chalcidians: 2000 cleruchs settled at Chalcis.
504 Aristodemus becomes tyrant of Cumae. (Hicks, *Gk Inscr.* 15.)
504/3 Acestorides archon.
- 536/520 Anacreon of Teos, lyric poet, and Ibycus of Rhegium fl. at the court of Polycrates. Besides love poems Ibycus wrote choral hymns on epic subjects.
- 534 Beginnings of Attic tragedy: Thespis.
- 536/20 Theodorus of Samos fl., one of the earliest to cast bronze. Also famous as an engraver of gems, and architect (with Rhoecus) of the temple of Hera at Samos.
- c. 530 Xenophanes founder of the Eleatic school fl. Driven from Colophon to Zancle, Catana and Elea, he wandered 67 years over Greece, *Fr.* 24 (?540—473). He wrote an hexameter poem *On Nature*, besides epics and elegiacs on a variety of subjects.
- 527—14 Onomacritus, an Athenian, at the court of Hipparchus fl. The Orphic theogony attributed to him.
- 525 Birth of Aeschylus.
- 523 Choerilus of Athens, tragic poet, begins to exhibit.
- c. 522 Theognis of Megara, a bitter political partizan, fl. Author of elegies to Cyrnus. (Mentions events of 506 and 492.)
- 518 Birth of Pindar.
- 516/2 Gitiadas of Sparta architect of the temple of Athena Chalcoecus.
- c. 504/0 Heraclitus of Ephesus, the last of the Ionian physical philosophers, wrote *On Nature* in a style proverbial for obscurity.
- c. 504 Endoeus of Athens sculptor fl. (a *ξδανον* of Athena on the Acropolis).

C. THE FIFTH CENTURY B.C.

120. The Ionians begin an ill-judged revolt which ends in the destruction of Miletus and the more complete subjugation of all Asiatic Greeks. Slight and ineffective aid had been given them by their kinsmen across the Aegean, who are next attacked. But Darius learnt to his amazement that the host which had sacked Eretria was no match on the field of Marathon for the Athenian hoplites charging with spear and shield. He did not live to carry out the grand invasion for which he was making elaborate preparations. Under Xerxes the whole resources of the Persian empire are pitted against the Greek nation, while Carthage lends aid by an invasion of Sicily. These attacks are repelled by the genius of Themistocles, the heroic self-sacrifice of the Athenians, and the large forces under the command of the Syracusan tyrant Gelon. In the struggle the Greeks are compelled, as never before, to unite, however imperfectly and reluctantly, for combined action, and to recognize a community of interest. The self-respect and enthusiasm of the victors receive a prodigious impetus.

Herodotus, v—ix, is the main authority for the period 500—479 (he was writing as late as 430).

*Civil Events**Literature and Art*

500/499 Ol.	Naxian oligarchs apply to Aristagoras of Miletus.	Architecture at the opening of the fifth century represented by the temple of Athena in Aegina: sculpture by the figures from the pediment. Contemporary schools of sculpture:
70. 1 Myrus ¹		(1) at Aegina, Callon, c. 524—462: Onatas (the <i>Black Demeter</i> at Phigalia; at Olympia the colossal <i>Heracles of the Thasians</i> , and votive offerings of the Achaeans and Hieron), c. 500—457:
499/8 Ol. 70. 2	499 Failure of the Naxian expedition. The Ionians persuaded by Aristagoras to revolt, contrary to the advice of Hecataeus.	
	The fleet at Myus won over: the tyrants, who were in command of it, expelled.	
	<i>Winter.</i> Aid sought in Sparta and Athens.	
	498 <i>Spring.</i> Despatch of Athenian and Eretrian forces. Victory of the Ionian fleet off Pamphylia.	

¹ The names of the Athenian archons are appended to each year; the archons for the years 499/8, 498/7, 497/6, 486/5 are unknown.

The following archons of the fifth and fourth centuries belong to years omitted from the chronological table:

501/0 Hermocreon	389/8 Antipater	350/49 Apollodoros
475/4 Dromocleides	388/7 Pyrgion	345/4 Eubulus
442/1 Diphilus	386/5 Mystichidés	344/3 Lyciscus
439/8 Glaucinus	384/3 Diestrepbes	328/7 Euthycritus
438/7 Theodoros	382/1 Evander	320/19 Neaechmus
436/5 Lysimachus	381/0 Demophilus	315/4 Praxibulus
434/3 Crates	380/79 Pytheas	314/3 Nicodorus
402/1 Micon	377/6 Calleas	313/2 Theophrastus
393/2 Demostratus	374/3 Socratides	304/3 Pherecles
392/1 Philocles	351/0 Theellus	303/2 Leostratus.

Lacrateides, a contemporary of Darius, archon in a year memorable for its severe winter, has been referred to one of the years 499-6.

Civil Events

Literature and Art

- 498/7 Ol. 70. 3 Sardis surprised and burnt. The Greeks defeated near Ephesus on the return march. Spread of the revolt from Byzantium to Cyprus, where Onesilus seizes Salamis. Athens refuses further aid.
- 497 Spring. Operations of Daurises on the Hellespont.
- 497/6 Ol. 70. 4 The Ionian fleet off Cyprus. Defeat and death of Onesilus. Revolt in Caria: battle of the Marsyas. Flight of Aristagoras, who is slain near Myrcinus.
- 496 Spring. Capture of Soli. Suppression of the revolt in Cyprus.
- 496/5 Ol. 71. 1 Reduction of Aeolis. In Caria, battles of Labraunda and Mylasa. Histiaeus arrives from Susa, but is discredited at Sardis and flees to Chios.
- 495/4 Ol. 71. 2 Cleomenes destroys 6000 Argives in the grove of Argos. The town defended by the women under Telesilla¹. Battle of Lade.
- 494/3 Ol. 71. 3 Siege and capture of Miletus 'in the sixth year of the revolt.'
- 493 Spring. The Persians reduce Chios, Lesbos, Tenedos.
- 493/2 Ol. 71. 4 Themistocles begins the fortification of Peiraeus. Miltiades retires from the Chersonese. Artaphrenes regulates the affairs of Ionia, making a survey and fixing tributes. Hippocrates, tyrant of Gela, Anaxilaus of Rhegium.
- 492/1 Ol. 72. 1 Expedition of Mardonius: the Persian fleet is wrecked off Mount Athos, but Thrace, Macedon and Thasos submit.
- 491 Spring. Envoys demand submission of the separate Greek cities. Aegina complies.
- 491/0 Ol. 72. 2 Deposition of Demaratus at Sparta. Leotychidas his successor (—469). Gelon tyrant of Gela. Ten Aeginetan hostages detained at Athens. Hence Aeginetan reprisals and ultimately war between Athens and Aegina (perhaps later 488/7).
- 490/89 Ol. 72. 3 A fresh Persian expedition under Datis and Artaphrenes having destroyed Naxos and Eretria lands in Attica, but is defeated at **Marathon** (Sept.).
- 489 Spring. Miltiades attacks Paros without success.
- 489/8 Ol. 72. 4 Trial and condemnation of Miltiades, who dies in prison of his wound. Theron, tyrant of Acragas.
- (2) at Sicyon, Canachus (*Apollo with the stag at Branchidae*):
- (3) at Argos, Ageladas (*Zeus Ithomas* for the exiled Messenians), c. 520—455.
- c. 500 Hecataeus of Miletus, traveller and geographer, and Dionysius of Miletus, historian, fl. Early Ionian prose-writers.
- c. 500 Lasus of Hermione, lyric poet and musician, teacher of Pindar.
- c. 500 Pratinas of Phlius, tragic poet, the first to exhibit satyric dramas.
- 499 Aeschylus begins to exhibit at the age of twenty-five.
- 498 Pindar, *Pythian* 10.
- c. 496 Charon of Lamprusacus, *λογογράφος*, early Ionian prose-writer, fl.
- c. 496 Birth of Sophocles.
- 493 Phrynichus is fined for exhibiting at Athens the *Capture of Miletus*.
- c. 492 Parmenides of Elea fl. (?c. 520—455)². A pupil of Xenophanes who reduced the Eleatic philosophy to a system, expounded in an hexameter poem *On Nature*.
- 490 Pindar, *Pythians* 6 and 12. Simonides of Iulis in Ceos (556—467) composed an epigram on the victors at Marathon (as later on Thermopylae, Salamis, Plataea). He lived at the court of Hipparchus, in Thes-saly, and later in Sicily. Author of hymns, paeans, dithyrambs, elegiacs.
- c. 490 Panyasis, epic poet, uncle of Herodotus, author of a *Heracleia*.
- 488 Pindar, *Olymp.* 14?

¹ These transactions are placed by Pausanias 'soon after the accession of Cleomenes.'

² Plato, *Farm.* 127 A. But Diog. L. ix. 23 places his ἀκμή in Ol. 69.

Civil Events

Literature and Art

- 488/7 Ol. 73. 1 Anchises
- 487/6 Ol. 73. 2 Telesinus
- 486/5 Ol. 73. 3
- 485/4 Ol. 73. 4 Philocrates
- 484/3 Ol. 74. 1 Leostratus
- 483/2 Ol. 74. 2 Nicodemus or ? (Nicomedes)
- 481/0 Ol. 74. 4 Hypsiclides
- 480/79 Ol. 75. 1 Calliades
- 479/8 Ol. 75. 2 Xanthippides
- 487 *Spring*. Ostracism of Hipparchus, son of Charmus, the head of the Peisistratid party at Athens.
- Alteration in the appointment of archons: the lot applied to the candidates proposed by the tribes.
- 486 *Spring*. Ostracism of Megacles, nephew of Cleisthenes.
- The revolt of Egypt delays the preparations of Darius for an invasion of Greece.
- Death of Darius. Accession of Xerxes* (-465).
Gelon master of Syracuse.
- 484 *Spring*. Ostracism of Xanthippus. Egypt reconquered. Xerxes' preparations go on for four years (-480).
- Proposal of Themistocles to devote the profit of the mines at Maroneia to the building of 100 triremes. The war with Aegina (*μέγιστος πόλεμος*) continues (till 481)
- 482 *Spring*. Ostracism of Aristides. Xerxes winters at Sardis. Congress at the Isthmus of cities willing to resist. Envoys despatched to Argos, Crete, Corcyra, Syracuse.
- 480 *Spring*. Xerxes marches unopposed through Thrace and Macedonia into Thessaly, the Greeks having abandoned the defence of Tempe.
- Recall of ostracized and disfranchised Athenians. ARTEMISIUM, THERMOPYLÆ (end of *August*), SALAMIS (*Sept.* 28). Xerxes withdraws with the fleet.
Gelon and Theron defeat the Carthaginians at HIMERA.
- 479 *Spring*. Attica reoccupied by the Persians. Athens burnt.
- Battles of PLATAEA and MYCALE (*August*).
Islands admitted to general Greek alliance. Ionians and Hellespontine Greeks allied with Athens.
Siege and capture of Sestus.
- 487 Chionides, comic poet, begins to exhibit 'eight years before the Persian war.'
- 486 Pindar, *Pythian* 7.
- c. 484 Epicharmus of Cos fl. He perfects Sicilian comedy and exhibits his plays at Syracuse shortly before the Persian war.
- 484 Birth of Herodotus.
- 481 Pindar *Nemean* 5 and Bacchylides 13.—Bacchylides (? c. 507—430 B.C.), a nephew of Simonides, competed with Pindar in the composition of odes, paeans, dithyrambs.
Other contemporary lyric poets: Timocreon of Ialysus in Rhodes, bitter enemy of Simonides and his patron Themistocles; Corinna of Tanagra, and Telesilla of Argos.
- 480 Pindar, *Isthmian* 5 (6) (for Phylacidas).
Birth of Euripides and of Antiphon.

121. Not content with the repulse of the invader, the Greeks resolve to continue the war and liberate their kinsmen in Asia from the Persian yoke. Thus is formed a maritime league under Athenian headship which succeeds in its immediate object but gradually becomes transformed into the Athenian empire.

The Pentecontaety, 478—431.

As the Peloponnesian confederacy continues under Spartan headship, the national forces are divided. The two rival confederacies, at first united in enmity to Persia, become lukewarm, jealous, and at last bitterly hostile,

while the war against the barbarian is practically abandoned. In Sicily the moderate rule of a Hieron is followed by the revival of free government, while the career of Ducetius proves that the native Sicels are assimilating Greek culture.

Throughout this period the Greeks put forth their full vigour in all fields. Art and literature rise rapidly to perfection.

Thucydides (i. 89—118) is almost the sole authority for the Pentecontaety, and while he criticises the chronology of his predecessor Hellanicus it is remarkable that he does not himself determine the *dates*, but only the *succession*, of events. The Thirty Years' Peace and the revolt of Samos are the only dates given by Thucydides: but the death of Xerxes and the disaster at Drabescus may be determined from data which he supplies, and for other events (*e.g.* Eurymedon or the earthquake at Sparta) the margin of conjecture may be reduced to a few years.

A few dates, independent of Herodotus and Thucydides, may be gleaned from Aristotle, *Constitution of Athens*.

	<i>Civil Events</i>	<i>Litgrature and Art</i>
	<i>Winter</i> . Themistocles at Sparta justifies the fortification of Athens.	478 Pindar, <i>Isthmian</i> 7 (8). Pindar, Simonides, Bacchylides, and after 472 Aeschylus at the court of Hieron.
478/7 Ol. 75. 3	478 <i>Spring</i> . Pausanias in Cyprus. Hieron succeeds Gelon at Syracuse.	
Timosthenes	Pausanias in Byzantium. His arrogance and correspondence with Xerxes.	Calamis of Athens active as a sculptor after the Persian wars. His most famous work the <i>Sosandra</i> : admired for his rendering of horses. Also Myron of Eleutherae, whose works, almost all in bronze, were distinguished for lifelike vigour and reality: <i>e.g.</i> the <i>Discobolus</i> , <i>Ladas</i> , the <i>Heifer</i> , afterwards taken to Rome.
	<i>Winter</i> . Recall of Pausanias on his trial for treason: he is acquitted.	
	477 <i>Spring</i> . General disgust of the allies at Spartan headship. Maritime confederation organized by Aristides for prosecuting the war with Persia: Delos to be the treasury: ὁ πρῶτος φόρος ταχθῆς.	Pythagoras of Samos, from 496 resident at Rhegium, famous for his <i>Philoctetes</i> and for athlete statues, <i>e.g.</i> that of <i>Euthymus</i> after his third Olympic victory 472.
477/6 Ol. 75. 4	Dorcis is recalled and Sparta retires from the maritime war.	Statues of the tyrannicides by Critius and Nesiotes set up in place of those carried off by Xerxes.
Adeimantus	Pausanias again in Byzantium.	476 Pindar, <i>Olymp.</i> 1, 2, 3, 10 and 11: Bacchylides 5. Themistocles choregus for Phrynichus, who exhibits the <i>Phoenissae</i> in honour of Salamis. Simonides victor with the dithyramb.
476/5 Ol. 76. 1	476 <i>Spring</i> . Leotychidas in Thessaly. Leotychidas deposed: Archidamus king of Sparta. Pausanias expelled from Sestus and Byzantium. Cimon besieges Eion.	
Phacdo	Anaxilaus of Rhegium succeeded by Miccythus. Foundation of Aetna in place of the Ionian cities of Catana and Naxos.	474 Pindar victor with the dithyramb. Pindar, <i>Fr.</i> 76—78, <i>Fythians</i> 9 and 11.
474/3 Ol. 76. 3	475 <i>Spring</i> . Capture of Eion. The recovery of the Thracian coasts takes some years. Attempt of Athens to plant a colony on the Strymon frustrated by Thracians.	
Acestorides	Hieron defeats the Etruscans in a sea fight off Cumae.	

Civil Events

Literature and Art

- 473/2 Ol. 76. 4 Between 474 and 472 Conquest of
Meno Scyros. Ostracism of Themistocles.
Anti-Spartan movement in Peloponnesus
put down by a victory at Tegea over
Arcadians and Argives.
- 472/1 Ol. 77. 1 Reduction of Carystus in Euboea by the
Chares Athenians. Treason and death of
Pausanias.
Revolution in Elis. Death of Theron.
Hieron deposes Thrasydaeus and an-
nexes Acragas.
- 471/0 Ol. 77. 2 Between 471 and 469 Defeat of Arc-
Praxiergus adians by Lacedaemonians at Dipaea.
The Argives reduce Tiryns.
- 470/69 Ol. 77. 3 Outlawry of Themistocles who escapes
Demotion to Corcyra and Epeirus. Συροικισμός
of Elis.
Revolt and reduction of Naxos. The-
mistocles lands at Ephesus on his way
to Persia.
- 469/8 Ol. 77. 4 438 *Spring*. Athenian expedition to
Apsephion Caria.
468/7 Ol. 78. 1 *Autumn*. Double victory of Cimon by
Theagenides land and sea on the EURYMEDON¹.
The Carian cities join Athens.
- 467/6 Ol. 78. 2 Athenian decrees concerning Colophon
Lysistratus and Erythrae: C.I.A. I. 9, 10, 11.
- 466/5 Ol. 78. 3 466 *Spring*. Death of Hieron. His
Lysanias brother Thrasybulus besieged in Or-
tygia and forced to capitulate. Syra-
cuse a free state (—405). Downfall
of tyrannies all over Sicily.
Cimon drives the Persians out of the
Chersonese.
465 *Spring*. Projected colony of Ennea
Hodoi on the Strymon. Revolt of
Thasos. Disaster of Drabescus: the
Athenian colonists cut off by the
Edonians².
- 465/4 Ol. 78. 4 Death of Xerxes. Artaxerxes I (—424).
Lysitheus
- 464/3 Ol. 79. 1 Earthquake at Sparta. Revolt of Mes-
Archedemides senians. Occupation of Ithome.
463 *Spring*. Thasos capitulates 'in the
third year.'
- 463/2 Ol. 79. 2 Cimon impeached by Pericles on his
Tlepolemus return from Thasos.
462 *Spring*. Expedition of Cimon, with
4000 men, to aid Sparta in the siege
of Ithome.
Revolt in Egypt.
- 462/1 Ol. 79. 3 Fall of the Areopagus: its political
Conon functions restricted by the reforms of
Ephialtes. State pay for dicasts in-
stituted by Pericles.
- 472 The *Persae* of Aeschylus.
Pindar, *Olymp.* 6 (or 468)
Isthmian 2 (or later). About
this time comic choruses com-
pete at the Great Dionysia and
Lenaea.
- ? 471 Thucydides born. Aeschy-
lus in Sicily. The *Women of*
Aetna.
The activity of Pheidias begins.
- 470 Hieron's victory at Delphi
celebrated by Pindar, *Pythian*
1, Bacchylides 4.
Pindar, *Olymp.* 12 (or 468).
- 469 Socrates born.
- 468 Sophocles' first victory.
Hieron's last Olympic victory:
Bacchylides 3.
- 467 Aeschylus' *Seven against*
Thebes.
- 466 Corax begins to teach rhe-
toric at Syracuse.
- Between 472 and 465 Polygno-
tus, the celebrated painter,
engaged in decorating the
temples of the Dioscuri and
Theseus, the Pinacotheca and
other buildings at Athens. His
most famous frescoes were the
Capture of Troy in the Stoa
Poecile and the *Lower World*
in the Lesche of the Cnidians
at Delphi. Micon and Panae-
nus also adorned the Stoa
Poecile with frescoes of Mara-
thon and the battle with the
Amazons.
The temple of Zeus at Olympia
is said to have been built with
the spoil of the Pisatans, con-
quered by Elis before 470.
The sculpture of the pedi-
ments attributed to Paeonius
of Mende and Alcamenes, a
pupil of Pheidias (not finished
before 457).
- 464 Pindar, *Olymp.* 7, 9 and 13,
Fr. 107.
- 462 Anaxagoras of Clazomenae,
physical philosopher, comes to
Athens. Pindar, *Pythians* 4
and 5.

¹ The battle is *after* the reduction of Naxos and *before* the revolt of Thasos.

² This was 29 years before the foundation of Amphipolis.

Civil Events

Literature and Art

- Return of Cimon from Messenia, the Spartans having dismissed his contingent. Breach with Sparta: alliance of Athens with Argos and Thessaly.
- 461 *Spring*. Ostracism of Cimon. Assassination of Ephialtes.
- 461/0 Ol. 79. 4 Euthippus
- 460/59 Ol. 80. 1 Phrasycleides
- 459 *Early*. Capitulation of the Messenians¹, who are settled by the Athenians in Naupactus. Megara joins Athens.
- The Persian army invades Egypt.
- 459/8 Ol. 80. 2 Philocles
- Summer*. Battle of Papremis.
- The Egyptian expedition decreed. The Athenian fleet under Charmantides moves from Cyprus to Memphis.
- 458 *Spring*. Battle of Halieis and naval battle off Cecryphaleia (Hicks, 19) between Athens and Corinth.
- 458/7 Ol. 80. 3 Habron
- Battle off the Aeginetan coast between Athens and Aegina. Aegina besieged by the Athenians.
- Battle in the Megarid between Athens and Corinth.
- Law permitting zeugitae to become archons.
- 457 *Spring*. The Peloponnesians in Phocis: they defeat the Athenians at TANAGRA. Recall of Cimon. The Athenians conclude an armistice with Sparta.
- 457/6 Ol. 80. 4 Mnesticheides
- The Athenians defeat the Boeotians at OENOPHYTA. Submission of Boeotia and Phocis. Capitulation of Aegina. Mission of Megabazus to Sparta from the Persian court.
- 456/5 Ol. 81. 1 Callias
- Completion of the long walls to Peiraeus and Phalerum. Capture of Troezen by the Athenians. Megabyzus undertakes to reduce Egypt.
- 455 Expedition of Tolmides round Peloponnesus: Gytheium burnt.
- 455/4 Ol. 81. 2 Sosistratus
- The Athenians besieged in the island of Prosopitis.
- 454 *Spring*. Athenian expedition to Thessaly in favour of Orestes.
- 454/3 Ol. 81. 3 Ariston
- The custody of the common funds removed by the Confederation from Delos to Athens.
- Annihilation of the Athenian army on the Nile and loss of relieving squadron.
- c. 460 Noted painters of the Pentecontaety were Pauson, whose forte was caricature, Agatharchus and Dionysius of Colophon.
- c. 460 Pindar, *Olymp.* 8. Hippocrates born. Democritus born.
- Fl. Magnes, a comic poet.
- 459 Thrasy-machus born.
- 458 Aeschylus, *Oresteia*.
- 457 A shield dedicated by the Lacedaemonians as acroterion of the temple at Olympia in honour of Tanagra.
- 456 Aeschylus dies at Gela. Pindar, *Olymp.* 4 and 5?
- 455 Euripides' *Peliadae*.

¹ 'In the fourth year' reading *τετάρτω* for *δεκάτω*, Thuc. i. 103. If *δεκάτω*, which Diodorus read, is right the revolt must have begun in 468, the date given by Philochorus. For the surrender of Ithome must have preceded the battle of Tanagra

Civil Events

Literature and Art

- Treaties made by Athens with Phocis and Egesta: C.I.A. IV. pp. 8, 58.
Pericles in Sicyon and Acarnania.
Achaia joins Athens.
- 453/2 Ol. 81. 4 Law reviving local justices (*ol karà*
Lysicrates *dēmious dikastai*) at Athens.
- 452/1 Ol. 82. 1 Annexation of Aethalia by the Syra- 452 Bacchylides 6, 7
Chaerephanes cians. Ducetius at the head of the Sicels defeats the Acragantians and Syracusans.
- 451/0 Ol. 82. 2 Law limiting the Attic franchise. 451 Ion of Chios begins to ex-
Antidotus Peace for 30 years between Sparta and Argos.
Defeat of Ducetius who surrenders to Syracuse.
- 450/49 Ol. 82. 3 Truce for five years between Athens 450—420 Rise of Sicilian Rhetoric. After Corax and Teisias the first authors of a handbook, Gorgias of Leontini became eminent as a teacher and writer.
Euthydemus and Sparta. Assessment of tribute. [Recurr 446 and 439. Probably also 429 and 425.]
449 *Spring*. Cimon's last expedition: to Cyprus.
Treaty between Athens and Miletus: c. 450 Leucippus, founder of the atomic theory, fl. (earlier than Melissus and Diogenes of Apollonia).
- 449/8 Ol. 82. 4 Death of Cimon. 450—423 Cratinus nine times victorious with comedies. He attacked Pericles and Aspasia and eulogized Cimon.
Pediens 448 *Spring*. ? The Greeks invited to a congress at Athens with a view to restoring the temples destroyed by the Persians and securing the peaceful navigation of the sea.
Lacedaemonian expedition to Delphi. Ducetius establishes himself at Cale Acte.
War between Syracuse and Acragas.
- 448/7 Ol. 83. 1 Pericles restores to the Phocians the 449—425 Crates, a comic poet.
Philiscus care of the Delphian temple.
447 *Spring*. Cleruchies in Chersonesus, Euboea, Naxos, Andros, Lemnos. About this time a convention concluded with Persia (cited by the orators as the Peace of Callias, or of Cimon).
- 447/6 Ol. 83. 2 Revolt in Boeotia: the Athenians de- 448 Birth of Aristophanes.
Timarchides feated at Coronea.
446 *Spring*. Revolt of Euboea and 447 The building of the Parthenon commenced, Ictinus and Callicrates architects.
Megara.
Peloponnesian invasion of Attica by Pleistoanax.
- 446/5 Ol. 83. 3 Retreat of Pleistoanax. Recovery of 446 Pindar, *Pythian* 8.
Callimachus Euboea.
Winter. The Thirty Years' Peace: Athens renounces her land empire, giving up Nisaea, Pegae, Troezen and Achaia.
- 445 New Sybaris founded. Middle 444 Empedocles of Acragas fl.
wall at Athens (after 445). Projected colony at Brea in Thrace (between 446 and 443, Hicks and Hill 41). He was active in the overthrow of Thrasylus and of the One Thousand. Author of philosophical poems *On Nature and Expiations*.
- 445/4 Ol. 83. 4 The Sybarites expelled from New 444 Empedocles of Acragas fl.
Lysimachides Sybaris found a city on the Traeis. Present of corn to Athens from Egypt.

Civil Events

Literature and Art

- 444/3 Ol. 84. 1 Foundation of Thurii.
Praxiteles Ostracism of Thucydides, the son of Melesias.
- 443/2 Ol. 84. 2 443 *Spring*.
Lysanias
- 441/0 Ol. 84. 4 440 Revolt of Samos. Help refused
Timocles by the Peloponnesian confederacy.
- 440/39 Ol. 85. 1 Battle off Sphagia: partial successes of
Morychides the Samians. Investment of the town.
439 Capitulation of Samos after nine months' siege.
- 437 About this time Phormio takes
Amphilochian Argos (Thuc. II. 68).
- 436 Foundation of Amphipolis.
About this time the expedition of Pericles to the Pontus. Athenian colonists at Sinoepe and Amisus.
- 435/4 Ol. 86. 2 Quarrel between Corinth and Corcyra.
Antiochides Corinthian defeat off Actium.
- 433/2 Ol. 86. 4 Alliance between Athens and Corcyra.
Apsuedes Battle of Sybota (*May 432*).
- 432 Revolt of Potidaea.
- 432/1 Ol. 87. 1 The Megarians excluded by a decree
Pythodoros from commercial intercourse with Athens and her allies. A Congress of allies at Sparta resolves upon war (*October*). Prosecutions of Aspasia, Pheidias and Anaxagoras.
- 443 Herodotus of Halicarnassus, the historian, one of the colonists of Thurii. The last event noticed in his history (VII. 137) is of date 430.
- 442 or 441 Sophocles' *Antigone*.
- 441 First victory of Euripides. Cratinus, *The Thracian Women*.
- 440 Melissus, general of the Samians in the revolt, the last Eleatic philosopher.
- 440/39 Prohibition of personal attacks in comedy (*μη κωμωδεῖν ἐξ ὀνόματος*). Repealed in 437/6.
- 438 Euripides' *Alceste*.
Completion of the Parthenon and of the chryselephantine Athena of Pheidias who goes to Olympia, where he receives a commission for the statue of Zeus.
- 437 Pherecrates, poet of the old comedy, victorious. The *metrum Pherecrateum* called after him.
- 436 Commencement of the Propylaea: Mnesicles architect.
Birth of Isocrates.
- 432 Publication of Meton's cycle.
Diogenes of Apollonia, almost the last physical philosopher (alluded to in the *Clouds*, 423).
Archelaus, pupil of Anaxagoras.
Protagoras of Abdera (481—411) the most famous of the professional lecturers and teachers, called Sophists: and Prodicus of Ceos, moralist and orator, active about this time.

122. The Athenian empire by seeking to impose a partial unity upon Greece had only provoked more and more the jealousy, suspicion, and alarm of the Peloponnesian confederacy. The struggle between these rival powers widened into a conflict of race between Ionians and Dorians, and a party warfare between democracy and oligarchy, in which the resources of Greece were shattered, until by a disgraceful alliance with Persia and by the zealous partizanship of Cyrus, Sparta secured the final decision in her favour.

The prosperity of the Sicilian Greeks was seriously impaired: the Athenian expedition was repelled at a heavy cost to the victors; the Carthaginian invasion destroyed five of the most flourishing states. Syracuse survived, but it passed under the tyranny of Dionysius.

Meanwhile the intellectual development proceeded apace. Tragedy had not yet passed its prime when the old comedy shot up to maturity; close upon the natural philosophers pressed the humanists and rhetoricians, the body of professional educators called sophists. In architecture, sculpture and painting, a succession of great artists became famous.

For the years 431—411 Thucydides is a contemporary authority of the first order; from 411 onwards Xenophon's *Hellenica*, I, II is a meagre supplement. Andocides' account of the events of 415, given in 399, must be received with caution.

	<i>Civil Events</i>	<i>Literature and Art</i>
	431 <i>Spring</i> . The Thebans attempt to surprise Plataea (<i>March</i>).	431 Euripides' <i>Medea</i> . Sculpture represented by Poly- cleitus of Sicyon, pupil of Ageladas, who settled at Argos and decorated the Heraeum after the fire of 423, and was architect of the theatre at Epi- daurus—most famous works: a <i>Doryphorus</i> , <i>Diadumenus</i> , <i>Amazon</i> , <i>Zeus Meilichius</i> (418), and chryselephantine <i>Hera</i> . Architecture repre- sented by the temple of Apollo Epicurius at Bassae near Phi- galeia: architect Ictinus.
431/0 Ol. 87. 2 Euthynus	War begins <i>May</i> 25th. First Pelopon- nesian raid into Attica (repeated in 430, 428, 427, 425). First annual raid of the Athenians into the Megarid (repeated every year until 424), and cruise of the fleet round Peloponnesus. The Aeginetans ex- pelled from their island and settled at Thyrea.	430 Hermippus comic poet fl. 429 Eupolis (<i>aetat.</i> 17) exhibits his first comedy. 428 Euripides' <i>Hippolytus</i> . Anaxagoras dies at Lampsacus.
430/29 Ol. 87. 3 Apollodorus	430 Plague at Athens . <i>Winter</i> . Potidaea capitulates. 429 <i>Spring</i> . Siege of Plataea. <i>Summer</i> . Trial and fine of Pericles. Phormio gains two naval victories in the Corinthian gulf. <i>Autumn</i> . Death of Pericles.	
429/8 Ol. 87. 4 Epameinon	428 <i>Spring</i> . Mytilene and most of Lesbos revolt. <i>Autumn</i> . Blockade of Mytilene by the Athenians. <i>Winter</i> . Escape of 212 Plataeans.	
428/7 Ol. 88. 1 Diotimus	427 <i>Summer</i> . Surrender of Mytilene: execution of the ringleaders: confisca- tion of the land. Alcidas crosses the Aegean with a Pelo- ponnesian fleet. Surrender of Plataea. Faction at <i>Corcyra</i> . 426 <i>Spring</i> . An Athenian fleet in Sicilian waters.	427 Embassy of Gorgias of Leontiai to Athens. Plato born (or 420). The <i>Banqueters</i> of Aristophanes.
427/6 Ol. 88. 2 Euclis		
426/5 Ol. 88. 3 Euthynus	Foundation of Heraclea in Trachis by the Lacedaemonians. Demosthenes, repulsed in Aetolia, with aid of the Acarmanians defeats the Ambracians and a Spartan auxiliary force at Olpae and Idomene. (The war in this part of Greece virtually terminated.)	426 Aristophanes' <i>Babylonians</i> .

Civil Events

Literature and Art

- 425** *Spring*. Fortification of Pylos by Demosthenes: the Spartans attack it, occupying Sphacteria. Proposals for a peace refused by Athens on the advice of Cleon.
- 425/4** Ol. 88. 4 Capture of Sphacteria and 292 Spartans by Cleon and Demosthenes. Stratocles
- Massacres at Corcyra: the oligarchs exterminated.
- Tribute of the Athenian allies raised. Darius II succeeds to the Persian throne (—405).
- 424** *Spring*. Conference at Gela. General pacification of Sicilian Greeks.
- 424/3** Ol. 89. 1 Capture of Cythera and Nisaea by the Athenians. Isarchus
- Brasidas marches through Thessaly: Acanthus revolts to him. He captures Amphipolis and Torone.
- Winter*. The Athenians invade Boeotia and are defeated at Delium.
- 423** *May*. Armistice for a year between Athens and Sparta.
- 423/2** Ol. 89. 2 Brasidas in the service of Perdiccas of Amynias Macedon.
- 422/1** Ol. 89. 3 **422** *Summer*. Cleon recaptures Torone. Alcaeus
- Cleon is defeated and he and Brasidas slain outside Amphipolis.
- Winter*. Negotiations for peace.
- 421** *April*. Peace of Nicias and alliance for fifty years between Sparta and Athens.
- 421/0** Ol. 89. 4 The terms refused by the allies of Aristion
- Sparta: they mistrust Sparta and try to form a new league.
- 420/19** Ol. 90. 1 **420** Athens enters into alliance with Astyphilus
- Argos and with Elis and Mantinea, recalcitrant allies of Sparta.
- 419/8** Ol. 90. 2 **419** Heraclea seized by the Boeotians. Archias
- Alcibiades in the Peloponnese.
- 418/7** Ol. 90. 3 **418** The Spartans invade Argolis and Antiphon
- defeat the new formed alliance at Mantinea. They recover the prestige lost at Sphacteria. Oligarchies established in Argos and Sicyon.
- 417** *Spring*. Ostracism of Hyperbolus.
- 417/6** Ol. 90. 4 **417** Popular rising at Argos against Euphemus
- the oligarchy set up by Sparta. Renewal of the alliance with Athens.
- 416/5** Ol. 91. 1 **416** An Athenian expedition conquers Arimnestus
- Melos.
- 415** *Spring*. Envoys from Egesta, asking aid against Selinus, determine the Athenians to intervene in Sicily.
- Summer*. Mutilation of the Hermae. Andocides banished from Athens under the decree of Isotimides.
- 425** Aristophanes' *Acharnians*. Painters of this time (431—404): Apollodoros of Athens (σκιαγράφος); Zeuxis of Heraclea: an *Helen* for the temple of Lacinian Hera: he also decorated the palace of Archelaus of Macedon (413—339); Parrhasius of Ephesus: the *Demos of Athens*; Timanthes of Cythnus: the *Contest for the arms of Achilles* and the *Sacrifice of Iphigenia*.
- 424** Aristophanes' *Knights*. Thucydides the Athenian general in command of Thrace: on the motion of Cleon he is banished. He is collecting materials for his history until the close of the war [Xenophon] *De Rep. Ath.* (not later than 424).
- 423** Aristophanes' *Clouds*. The prize obtained by Cratinus with the *Wineflask*.
- 422** Aristophanes' *Prelude* (Ἰποαργών), *Wasps*.
- 421** Eupolis' *Flatterers* (first prize) and *Maricas*; Aristophanes' *Peace* (second).
- c. **421—417** Antiphon *On the death of Herodes*.
- 421** or **420** Euripides' *Suppliants*.
- 420** Birth of Isaeus.
- c. **420** Hellanicus of Mytilene fl., author of an *Atthis* and other historical works.
- Fl. Democritus, the greatest Greek natural philosopher (460—351). He developed the atomic theory of Leucippus.
- 417** Agathon wins the prize for tragedy.
- c. **415** Strongylion, sculptor in bronze: the *Wooden horse* and *Artemis Soteira*.
- Pupils of Pheidias: Agoracritus of Paros: the *Nemesis* at Rhamnus;

Civil Events

Literature and Art

- 415/4 Ol. 91. 2 The Athenian expedition sails for Sicily. Charias Alcibiades is recalled, escapes, is condemned in his absence. (C.I.A. II. 1250 Add.)
- 414/3 Ol. 91. 3 Gylippus, having landed at Himera, defeats the Athenian army besieging Syracuse and saves the city.
- 413/2 Ol. 91. 4 Cleocritus
- 412/1 Ol. 92. 1 Callias Σκαμβωνίδης
- 411/0 Ol. 92. 2 Mnesilochus (for two months) Theopompus
- 410/9 Ol. 92. 3 Glaucippus
- 409/8 Ol. 92. 4 Diocles
- 408/7 Ol. 93. 1 Euctemon
- 407/6 Ol. 93. 2 Antigens
- 406/5 Ol. 93. 3 Callias Ἀγγεληθευ
- 414 *Spring*. Siege of Syracuse. *Summer*. Death of Lamachus.
- 413 *Spring*. The Lacedaemonians renew the war with Athens, and occupy Decelea (—404). Εἰκοστή substituted for φῶρος.
- September*. Total destruction of the Athenian forces in Sicily, including the relieving expedition under Demosthenes.
- Probolouoi appointed at Athens to supervise the administration.
- 412 Revolt of Chios, Miletus and other allies of Athens.
- Alliance between Persia and Sparta.
- 411 *Spring*. Blockade of Chios, revolt of Rhodes.
- May*. Subversion of democracy at Athens by the Four Hundred. Negotiations opened with Sparta.
- The army and fleet in Samos faithful to the democracy.
- Revolt of Euboea. Naval defeat of the Athenians off the island.
- September*. Fall of the Four Hundred. A moderate constitution set up.
- Winter*. Battles of Cynossema between Athenian and Spartan fleets.
- 410 *Spring*. Battle of CYZICUS: destruction of the Spartan fleet.
- 410 (*July* probably). Restoration of full democracy at Athens.
- 409 Pylos and Nisaea retaken.
- Hannibal's invasion of Sicily: destruction of Selinus and Himera.
- 408 *Spring*. Selymbria, Chalcedon, regained for Athens; Byzantium taken after a long siege.
- 407 *Spring*. Thasos reduced. Alcibiades returns (*May*) to Athens. He is re-appointed general. Death of Hermocrates of Syracuse.
- Battle of Notium: Lysander defeats the Athenians. Alcibiades deposed.
- 406 *Spring*. Second Carthaginian invasion of Sicily. Acragas invested.
- Callicratidas defeats Conon and shuts up the Athenian fleet in Mytilene.
- Autumn*. Battle of ARGINUSAE.
- November*. Trial and condemnation of six of the Athenian generals. *Midwinter*. Acragas taken by Hannibal.
- Colotes: chryselephantine *Athena* at Elis;
- Theocosmus of Megara: a *Zeus* in the Olympieum;
- Alcamenes: *Aphrodite in the gardens*; *Hecate triformis*; *Heracles* (for Thrasybulus 403).
- Also of the Attic school, Callimachus: *Hera* at Plataea and *Laconian Caryatides*.
- 414 Aristophanes' *Birds*, second to the *Revellers* of Ameipsias.
- 413 Hegemon's *Gigantomachia*.
- 412 Lysias and Polemarchus driven from Thurii to Athens. Euripides' *Helena*.
- 411 Aristophanes' *Lysistrata* and *Thesmophoriazusae*.
- Antiphon (480—411), the most eminent speech-writer of the day and head of a rhetorical school, executed for his share in the Revolution of the Four Hundred.
- c. 410 Hippias of Elis—polymath (rhetor, sophist, mathematician, astronomer, poet, painter, sculptor and critic) fl.
- 410 Andocides, *De Reclitu*.
- 409 Sophocles' *Philocetes*.
- 408 Euripides' *Orestes*, Aristophanes' *Plutus*.
- Hippodamus of Miletus, architect and political theorist, lays out the new town of Rhodes.
- 407 Plato, *atat.* 20, comes under the influence of Socrates.
- 406 Death of Euripides and of Sophocles.
- 405 Aristophanes' *Frogs*. Phrynichus second with the *Muses*. Other poets of the Old Comedy: Plato Comicus (fragments of 30 plays): Telecleides: Strattis: Theopompus.

*Civil Events**Literature and Art*

- 405/4 Ol. 93. 4 Alexias 405 The Athenian fleet surprised and destroyed by Lysander at AEGOSPOTAMI (? Aug.). Blockade of Athens. Fall of Gela and Camarina. Dionysius, tyrant of Syracuse, makes peace with Carthage.
404 April. Surrender of Athens and end of the war.
Destruction of the Long Walls, restoration of exiles, surrender of the fleet.

D. THE FOURTH CENTURY B.C. TO THE BATTLE OF CHAERONEA.

123. The Spartans, who had professed at the outset of the Peloponnesian war to be liberators of Greece from the 'tyrant city,' used their victory so selfishly that their allies were quickly disgusted, and within ten years a coalition was formed to break up their power. The attempt did not succeed, though it was favoured by the Persians whose fleet destroyed the maritime supremacy of Sparta at the battle of Cnidus. But Persia changed sides, and the king's peace re-established Sparta in her old supremacy by land and enabled her to oppress the weaker states with impunity until Thebes, at first allied with Athens (now at the head of a new confederacy), stoutly resisted, defied, and at Leuctra overthrew the oppressor. In the west Dionysius I extended his power both in Sicily and Italy and waged several wars with Carthage.

Supremacy
of Sparta:
404—371.

Xenophon's *Hellenica*, II—VI, is still our main authority. While his impartiality has often been assailed—and he is an avowed champion of Sparta and Agesilaus—he is after all a contemporary, and his sins are mostly sins of omission. The speeches of Lysias throw light on the condition of Athens under the Thirty and for some years afterwards. Diodorus Siculus is, in this century, the chief authority for Sicilian history.

As regards intellectual progress, we note the beginnings of the Middle Comedy, but verse is becoming less important than prose; oratory and philosophy develop side by side. In art there is undiminished activity; even greater technical perfection and a mellower loveliness are attained in this century than in the last.

*Civil Events**Literature and Art*

- 404/3 Ol. 94. 1 Pythodorus was not recognized) 404 May. The Thirty in power at Athens. Excesses of the Thirty. Execution of Theramenes, the advocate of moderation.
Winter. Thrasybulus with a band of exiles occupies Phyle and advances to Peiraeus. The Thirty fortify Eleusis.
- 404 Critias of Athens, who died 403, poet and critic (elegies, tragedies, political pamphlets). Contemporaries of Lysander were Antimachus of Colophon, epic and lyric poet: author of a *Thebais* and of *Lyde*, a mythological poem:
Timotheus of Miletus (447—357), the reformer of music and dithyrambic poet: one *vōmos* extant, *The Persians*: and

Civil Events

Literature and Art

- 403/2 Ol. 94. 2 Enkleides 403 Civil war in Attica. Critias slain. The Thirty deposed and succeeded by the Ten. Peace restored at Athens by the intervention of the Spartan King Pausanias. General amnesty (Boedromion *September* the 12th). Restoration of democracy.
- 401/0 Ol. 94. 4 Xenaenetus Expedition of Cyrus. His victory and death at Cunaxa. Return of his Greek mercenaries to Trapezus. (400, *February*.) Sparta makes war upon Elis (—399). Between 403 and 401 Dionysius subdues the Ionic cities Naxos and Catana and the Sicels.
- 400/399 Ol. 95. 1 Laches 399/8 Ol. 95. 2 Aristocrates 398/7 Ol. 95. 3 Euthycles 397/6 Ol. 95. 4 Suniades 396/5 Ol. 96. 1 Phormion
- War between Sparta and Persia (lasting till 386). Thimbron in Asia Minor. 399 *Spring*. Accession of Agesilaus. Dercylidas recovers the cities of Aeolis. Conspiracy of Cinadon at Sparta. 397 *Spring*. Dionysius declares war with Carthage. Dionysius takes Motye. 396 *Spring*. Agesilaus in Asia. Naval victory of Magon over the Syracusans off Catana. Himilcon besieges Syracuse: pestilence decimates the Carthaginian army. 395 *Spring*. Tithranstes, the successor of Tissaphernes, through Timocrates of Rhodes invites Thebes, Corinth, Argos and Athens to form a coalition against Sparta. Spartan attack upon Haliartus: Lysander slain.
- 395/4 Ol. 96. 2 Diophantus 394 *Spring*. Recall of Agesilaus from Asia. **The Corinthian war** (—386). Victory of Sparta over the Corinthians and their allies at NEMEA (*July*). Naval victory of the Persian fleet under Pharnabazus and Conon off CNIDUS over the Spartans under Peisander (end of *July*). The islands and Asiatic cities relieved of Spartan harmosts. Agesilaus defeats the Boeotians at CORONEA (*August* 14). 393 *Spring*. Cythera taken by Pharnabazus and Conon. The long walls of Athens restored by the help of the Persians.
- 391/0 Ol. 97. 2 Nicoteles 390/89 Ol. 97. 3 Demostratus 390 *Spring*. Destruction of a Spartan mora by the peltasts of Iphicrates. 390 War between Evagoras of Cyprus and the Persians (—380). 389 *Spring*. Expedition of Thrasybu-
- Choeirilus of Samos, epic poet, author of a *Persis*: resident at the court of Archelaus of Macedon (413—399) as Agathon and Euripides were. 403 Lysias' speech *Against Eratosthenes*. Proposal to give Lysias the Athenian franchise defeated by Archinus. 401 Lysias, *Or.* 32, *Against Diogeiton*. c. 400 Lysias, *Or.* 25, *Defence on the charge of subverting the democracy*. Sophocles' *Oedipus at Colonus* represented.
- 399 Socrates condemned and executed on a charge of impiety and corrupting youth, brought by Anytus, Meletus and Lycon. Andocides *On the Mysteries*. [Lysias] *Against Andocides*. Lysias, *Or.* 30, *Against Nicomachus*. 398 Ctesias of Cnidus, court physician of Artaxerxes, brought down his *Persica* to this year. Lysias, *Or.* 13, *Against Agoratus*. 397 Isocrates, *Or.* 16, *De bigis*. c. 396 Lysias, *Or.* 18, *On the confiscation of the property of Eucrates*. 395/4 Lysias, *Or.* 14 and 15, *Against Alcibiades*.
- c. 393 Polycrates' *Accusation of Socrates*. Followed by Xenophon's *Memorabilia* and (perhaps) Plato's *Apology*. 392 or 389 Aristophanes' *Ecclesiazusae*. Gorgias' *Olympic Oration*. Between 392 and 378 Isocrates active as teacher of rhetoric. c. 391 Isocrates, *Busiris*, and *Against the Sophists*. 392/1 Andocides, *De Pace*. 390 Birth of Lycurgus. c. 389 Birth of Aeschines and Hypereides. 389 The activity of Isaeus as a speech-writer commences (—353): *Or.* 5.

Civil Events

Literature and Art

- lus: Thasos, the Chersonese, Byzantium, Chalcedon recovered for Athens. Between 391 and 387 Dionysius makes conquests in Italy including Locri, Rhegium, and Croton.
- 387/6 Ol. 98. 2 Antalcidas with his fleet master of the Aegean: the Athenian corn-supplies threatened.
Theodotus
- 386 Spring. The King's Peace or Peace of Antalcidas concluded between Persia and Sparta, and between Sparta and the coalition. Autonomy of the Greek cities proclaimed.
- 385/4 Ol. 98. 4 Mantinea broken up into four villages by the Spartans.
Dexitheus
- 383/2 Ol. 99. 2 A Spartan garrison occupies the Cadmea at Thebes.
Phanostratus
- The Spartans make war on Phlius and Olynthus (—379) and break up the Chalcidian federation.
- 379/8 Midwinter. Liberation of Thebes by Melon and Pelopidas. The Spartans expelled and democracy set up.
Ol. 100. 2
Nicon
- 378 Spring. Spartan invasion of Boeotia (repeated in 377 and 376). Sphodrias attempts to surprise Peiraens. Athens makes an alliance with Thebes.
- 378/7 Financial reform at Athens.
Ol. 100. 3
Nausinicus
- 376/5 The Athenians under Chabrias defeat the Spartans at sea off NAXOS (September).
Ol. 101. 1
Charisander
- 375/4 Some Boeotian towns reduced by the Thebans.
Ol. 101. 2
Hippodamas
- 373/2 Spartan expedition against Corcyra repulsed before the arrival of Iphicrates and his relieving fleet.
Ol. 101. 4
Asteius
- 372/1 Destruction of Plataea by the Thebans
Ol. 102. 1
Alcisthenes
- Jason tyrant of Pherae reduces Pharsalus and becomes tagus of Thessaly.
- 371 Congress at Sparta. Peace concluded (June), from which Thebes is excluded.
- 371/0 Battle of LEUCTRA (July). Jason negotiates the retreat of the surviving Lacedaemonians.
Ol. 102. 2
Phrasicleides
- c. 388 Lysias, *Or.* 28 and 29, *Against Ergocles*, and *Against Philocrates*. *Or.* 33, *Olympiacus*.
- 388 Aristophanes' *Plutus* (second edition).
- 387 Lysias, *Or.* 19, *On the property of Aristophanes*.
- Plato (*aetat.* 40) first visits Sicily.
- 386 Plato begins to teach in the Academy.
- 385/4 Antiphanes first exhibits at Athens (he wrote 260 comedies and gained 13 victories).
- 385 Plato's *Symposium* not earlier than this year.
- 384 Demosthenes and Aristotle born.
- 381/0 Lysias' latest extant speech, the fragment *For Pherenicus*.
- 380 Isocrates' *Panegyricus*. About this time the death of Gorgias, Lysias, Aristophanes, and Philoxenus of Cythera, the dithyrambic poet. Birth of Ephorus of Cyme and Theopompus of Chios.
- 378 Prominent orators at Athens: Cephalus, Callistratus, Thrasybulus of Collytus, Leodamas, Aristophon.
- 376—351 Second period of Isocrates' school.
- 376 Death of Antisthenes. Anaxandrides, of Cameirus in Rhodes, victor at Athens [perhaps with the *Protesilaus*, in which the marriage of Iphicrates to a Thracian princess is celebrated]. He was author of 65 comedies, and gained the prize ten times.
- 373 Isocrates' *Plataicus*. About this time *Or.* 2 and 3 addressed to Nicocles (successor of Evagoras in 374).

124. After the sudden and complete fall of Sparta the cause of oligarchy gave way in many states before a new democratic movement. In the Peloponnesus itself the genius of Epameinondas dealt Spartan power fatal blows by the union of Arcadia and the restoration of the Messenians. For the time Theban arms were irresistible. But deprived of her incomparable leader, and unable to retain the allegiance of discontented allies, Thebes, like Sparta, soon lost the prestige she had so suddenly acquired. Meanwhile a new power was growing in the north. Philip of Macedon, after repelling foreign invasion, enforcing military service, and expelling the Athenians from the Macedonian seaboard, was prepared to interfere, as opportunity presented, in central and southern Greece. He overran Thessaly, destroyed Olynthus, invaded Phocis. In peace and war alike, by intrigue and violence, he laboured incessantly to disarm and overcome all opposition, until the victory of Chaeronea secured the fruits of a policy which had raised up a Philippizing party in half the Greek states. What Athens, Sparta, and Thebes had attempted in vain—the unity of Greece—was now effected, in spite of their opposition, under the headship of a rude and only half Hellenic northern neighbour.

The greatness of Thebes and the rise of Macedon: 370—338.

In the west the military monarchy which Dionysius I had founded in Sicily is lost by the incompetence of his successor. After a period of dissension and deplorable anarchy Timoleon, sent from Corinth with a relieving force, liberates Syracuse, expels the Sicilian tyrants, and decisively defeats the Carthaginians who had taken advantage of Sicilian troubles to resume their encroachments.

In this period prose style was perfected: oratory and polite letters preeminently flourished. The middle comedy is still prolific. The progress of science—mathematics, astronomy, natural history, biology—is remarkable. Sculpture in Scopas and Praxiteles attains to new perfection; every branch of art is assiduously cultivated.

To the year 362 Xenophon, *Hellenica* VI 5 and VII, is hardly better than a Peloponnesian chronicle, so numerous are the omissions. Diodorus XV, XVI (from 362 the only connected narrative) is most unsatisfactory: Plutarch (*Agessilaus*, *Pelopidas*, *Demosthenes*, *Dion*, *Timoleon*), even Justin and Nepos, may be used as supplements. In marked contrast to these late narratives the speeches of Demosthenes and Aeschines and the pamphlets of Isocrates are invaluable first-hand authorities.

Civil Events

Literature and Art

- 370 *Spring*. Ferment in Peloponnesus. Scytalism at Argos: 1200 oligarchs massacred. Disturbances at Tegea, Phlius, Phigaleia, Corinth, Sicyon. The walls of Mantinea rebuilt.
- Assassination of Jason of Pherae.
The Arcadian League founded.
- 370/69
Ol. 102. 3
Dysnicetus
- Winter*. First Theban invasion of Peloponnesus.
Megalopolis founded. Messene restored.
- 369 *Spring*. Alliance between Athens and Sparta.
- 369/8
Ol. 102. 4
Lysistratus
- Second Theban invasion of Peloponnesus: Sicyon and Pellene detached from Sparta. Dionysius I sends 20 triremes to aid the Spartans.
- 368 *Spring*. Pelopidas in Thessaly. Alliance of Macedonia with Thebes: Philip a hostage.
- 368/7
Ol. 103. 1
Nausigenes
- Defeat of the Arcadians by Archidamus and the mercenaries of Dionysius at Midea (the tearless battle).
Congress at Delphi.
- 367 *Spring*. Epameinondas in Thessaly procures the release of Pelopidas who had been taken prisoner by Alexander of Pherae. Death of Dionysius I.
- 367/6
Ol. 103. 2
Polyzelus
- Envoys sent by the principal Greek states to Susa: Pelopidas from Thebes.
Winter. Congress at Thebes. Peace on the terms of the King's rescript refused.
- 366 *Spring*. Epameinondas invades Peloponnesus for the third time. The adhesion of Achaia secured.
Oropus occupied by a Theban garrison. Alliance between Athens and Arcadia
Assassination of Lycomedes. Corinth makes a separate peace with Thebes.
- 366/5
Ol. 103. 3
Cephalodorus
- 365 *Spring*. Timotheus conquers Samos. Cleruchies assigned in Samos and the Chersonese.
- 365/4
Ol. 103. 4
Chion
- Outbreak of war between Elis and Arcadia.
- 364 *Spring*. A Theban fleet sent out under Epameinondas. Byzantium joins the Theban alliance.
- 364/3
Ol. 104. 1
Timocrates
- Death of Pelopidas in a battle with Alexander of Pherae at Cynoscephalac (shortly after July 12). The Arcadians exclude the Eleans from the Olympic festival.
Destruction of Orchomenus as a punishment for alleged disaffection to Thebes.
- Sculpture in the fourth century represented by Cephisodotus of Athens (*Eirene and the infant Plutus*, c. 371):
Scopas of Paros (394—349?), architect of the temple of Athena Alea at Tegea:
Praxiteles of Athens (the *Aphrodite of Cnidus*, *Eros*, *Satyr* and extant *Hermes*):
Silanion of Athens, Damosiphon of Messene.
- Fl. Eudoxus of Cnidus, astronomer and philosopher.
- 367 Dionysius I gains the tragic prize at Athens. Plato visits Sicily. Philistus of Syracuse (c. 435—356) becomes the adviser of Dionysius II. He left a *Sicilian History* in two parts (going down to 363/2).
Aristotle, *aetate*. 17, comes to Athens as a student.
- 366 The assumed date of Isocrates' *Archidamus* (perhaps not published before 356).
Fl. Anaximenes of Lampsacus, rhetorician and historian (380—320).
- c. 365—360 Deinarchus born at Chalcis.
- 364/3 Demosthenes' suit against his guardian Aphobus, *Or.* 27, 28, 29.

Civil Events

Literature and Art

- 363 *Spring*. A fresh Theban expedition to Thessaly: Alexander of Pherae is defeated and deprived of all his possessions except Pherae.
- 363/2** Division in Arcadia: the Ten Thousand refuse to appropriate the sacred treasures of Olympia to the payment of the troops.
Ol. 104. 2
Charicleides
- Tegea now Theban, Mantinea Spartan.
- 362** *Early Summer*. Theban invasion of Peloponnesus. Surprise of Sparta attempted. Battle of MANTINEA: victory and death of Epameinondas (12 Scirophorion, beginning of *July*). Peace concluded, from which Sparta is excluded by her refusal to recognise the independence of Messenia. Revolt of satraps in Asia Minor: Dames, Ariobarzanes, Maussollus of Caria and Orontes (—359). Death of Agesilaus on his return from Egypt, where he had served as a mercenary for the native kings Tachos and Nectanebis.
- 362/1** *Spring*. Accession of Philip II in Macedonia.
Ol. 104. 3
Molon
- 361/0** *Spring*. Assassination of Alexander of Pherae. Accession of Darius Ochus in Persia (—337).
Ol. 104. 4
Niciphemus
- 360/59** *Spring*. Euboea recovered from Thebes by the Athenians under Timotheus. Expedition of Chares to the Chersonese: Sestus recaptured from Cersobleptes.
Ol. 105. 1
Callimedes
- 359/8** Philip captures Amphipolis and Pydna. He forms an alliance with Olynthus. War between Athens and Philip (—346).
Ol. 105. 2
Eucharistus
- 358/7** Expedition of Dion to Syracuse to expel Dionysius II.
Ol. 105. 3
Cephisodotus
- 357/6** *Spring*. Dion, master of Syracuse, besieges Orygia. Philip captures Potidaea.
Ol. 105. 4
Agathocles
- 356** *Spring*. Dion, master of Syracuse, besieges Orygia. Philip captures Potidaea.
- 356/5** *Spring*. Dion, master of Syracuse, besieges Orygia. Philip captures Potidaea.
Ol. 106. 1
Elpines
- 355/4** *Spring*. Dion, master of Syracuse, besieges Orygia. Philip captures Potidaea.
Ol. 106. 2
Callistratus
- 362/1** Plato's last visit to Sicily, in the interests of the banished Dion. Xenophon's *Hellenica* closes with the battle of Mantinea, having begun from 411. Demosthenes, *Or.* 30, 31, *Against Onetor*. Apollodorus sues Timotheus (*Dem. Or.* 49).
- 360/59** Theopompus of Chios, pupil of Isocrates, commenced his history, the *Philippica* in 58 books, with this year (—336).
- 359/8** Demosthenes trierarch. He writes, *Or.* 41, *Against Spudias*, and *Or.* 55, *Against Callicles*. Celebrated painters, *c.* 360: Aristeides of Thebes (fl. 380—340): Euphranor of Corinth, also a sculptor (he painted the cavalry fight before Mantinea in which Gryllus, Xenophon's son, fell): Nicias of Athens, contemporary with Praxiteles: also the school of Sicyon, Pamphilus, Melanthius, and Pausias, famous for encaustic. Poets of the Middle Comedy: Alexis of Thurii, credited with 245 plays (392—286): Eubulus, Ararus, Archippus and Amphis.
- 356/5** Isocrates, *ælat.* 80, publishes *Or.* 8, *De Pace*.
- 355/4** Isocrates' *Areopagiticus*. Demosthenes, *Or.* 22, *Against Androtion*, *Or.* 20, *Against Leptines*. Xenophon, *On the Athenian revenues*.

Civil Events

Literature and Art

- of Chios, Cos and Rhodes: Lesbos and Corcyra about the same time secede.
- 354/3**
Ol. 106. 3
Diotimus Eubulus in power at Athens.
- 353** *Spring*. A Theban force under Pammenes sent to support the revolted satrap Artabazus. Onomarchus takes Orchomenus. Dion assassinated by Callippus. Philip in Thessaly: he is defeated by Onomarchus but takes Pagasae. Onomarchus captures Coronea and defeats the Thebans at Hermaeum.
- 352** *Spring*. Philip again in Thessaly: Onomarchus defeated and slain, Pherae taken. Philip's advance southwards checked at Thermopylae by an Athenian force. A Theban force under Cephision supports Megalopolis against Sparta. Philip in Thrace: submission of Cersobleptes.
- 352/1**
Ol. 107. 1
Aristodemus Philip at war with Olynthus. Expeditions sent by Athens under Chares and Charidemus to its relief.
- 349/8**
Ol. 107. 4
Callimachus **348** *Spring*. In Euboea Eretria, Chalcis and Oreus revolt from Athens. Phocion narrowly escapes defeat at Tamynae. An Athenian detachment captured at Zaretra.
- 348/7**
Ol. 108. 1
Theophilus *Autumn*. Fall of Olynthus before the third expedition under Chares arrives.
- 347/6**
Ol. 108. 2
Themistocles **346** *Spring*. Peace of Philocrates. Ten Athenian envoys sent to treat with Philip. The terms agreed upon accepted by the assembly (*March*) and the envoys despatched to take the oaths from Philip and his allies return (*June*) a few days before Philip reaches Thermopylae. Phalaecus retires under a convention.
- 346/5**
Ol. 108. 3
Archias The Amphictyons decree the destruction of Phocis as a state. Philip presides at the Pythian games. Dionysius II recovers Syracuse.
- 343/2**
Ol. 109. 2
Pythodotus Alliance of Megara with Athens. Expedition of Timoleon to Syracuse. Dionysius II capitulates: Ortygia dismantled.
- 342/1**
Ol. 109. 3
Sosigenes Philip occupies Oreus. Alliance of Chalcis with Athens. *Winter*. Philip in Epeirus: Arybbas dethroned, Alexander his successor. Diopceithes active on the Hellespont.
- 354/3** Demosthenes, *Or. 14, De Symmoris*.
- 353/2** Isocrates, *Or. 15, De Antidosis*.
Isaeus, *Or. 7*, probably his latest extant speech.
- Demosthenes, *Or. 16, For the Megapolitans, Or. 24, Against Timocrates, Or. 15, Pro Rhodiourum libertate*.
- 352/1** Demosthenes, *Or. 23, Against Aristocrates and (351 Spring) Or. 4, First Philippic*.
c. 350 In the contest for eloquence instituted by Artemisia in honour of Maussollus Theopompus defeats Theodectes and Naucrates. Theodectes was victorious in tragedy.
- 350/49** Demosthenes, *Or. 36, For Phormion*.
- 349** *Autumn*. Demosthenes, *Or. 1—3: the Olynthiacs*.
- 348/7** Demosthenes, *Or. 39, Against Boeotus*.
- 347** Death of Plato. Aristotle and Xenocrates leave Athens for Atarneus.
- 347/6** Demosthenes, *Or. 21, Against Meidias* (not delivered).
- 346** *April*. Isocrates, *Philippus*.
August. Demosthenes, *De Pace*.
- 345** *Spring*. Aeschines, *Or. 1, Against Timarchus*.
- 344/3** Demosthenes, *Or. 6, Second Philippic*.
- 343/2** Hegesippus (?) *De Halonneso* [*Dem. Or. 7*]. Demosthenes, *Or. 19*, and Aeschines, *Or. 2, On the Embassy*.
- Aristotle at the Macedonian court as tutor of Alexander (—340/39).
- 342/1** Birth of Menander and of Epicurus (*Fan. 341*).

Civil Events

Literature and Art

- 341/0**
Ol. 109. 4
Nicomachus
- 340/39**
Ol. 110. 1
Theophrastus
- 339/8**
Ol. 110. 2
Lysimachides
- 338/7**
Ol. 110. 3
Chaerondas
- 341 Spring.** Philip in Thrace, Cersobleptes dethroned.
- 340 Spring.** Philip attacks Perinthus and Byzantium.
- War declared by Athens. The siege of Byzantium raised. Demosthenes reforms the trierarchic system.
- 339 Spring.** Expedition of Philip against Ateas, the Scythian king.
- May.* Timoleon gains a signal victory over the Carthaginians under Mago at the Crimessus.
- Philip, as general of the Amphictyonic League against Amphissa, occupies Elatea. Panic at Athens. The Theoric Fund diverted to war purposes.
- 338** Alliance of Athens and Thebes.
- September.* Philip's victory at CHAERONEA.
- Macedonian garrison in the Cadmea. Peace of Demades. Archidamus falls in Italy fighting for Tarentum against the Lucanians.
- 341 Spring.** Demosthenes, *Or.* 8, *On the Chersonese*, and *Or.* 9, *Third Philippic*.
- 341/0** Demosthenes, *Or.* 10, *Fourth Philippic*.
- The *Universal History* of Ephorus of Cyme was carried as far as this year. Diyllus continued it to 336.
- c.* 340 Anaximenes (?) *Rhetoric* [among Aristotle's works: *Rhet. ad Alexandrum*].
- 339** Isocrates' *Panathenaicus* [begun in 342, *actat.* 94]. Xenocrates succeeds Speusippus in the headship of the Academy (-314). Heracleides of Pontus, a prominent member of the school and prolific author, was also a candidate.
- 338** Death of Isocrates.

E. THE END OF THE FOURTH AND OPENING
OF THE THIRD CENTURIES B.C.

125. Greece was now a dependency of Macedonia: its fortunes were

Fall of the
Persian
empire:
foundation of
the Hellenistic
kingdoms:
338-280.

swallowed up in the broad stream of universal history. Alexander destroyed the Persian empire, extended his conquests as far as India, and founded numerous Greek cities. After his death, as no strong central authority arose to keep his dominions together, the chief satraps of the provinces, *e.g.* Ptolemy in Egypt and Cassander in Macedonia, assumed the title of kings. Antigonus and his son Demetrius, the last aspirants to universal rule, were successively overthrown by a coalition of their rivals. Their fall paved the way for the ultimate establishment of three great powers, Macedonia itself and the Macedonian kingdoms of Ptolemy in Egypt and Seleucus in Asia, to whom fell the lion's share of the Persian empire.

In literature the last efforts of oratory, the development of the New Comedy, together with much activity in philosophy and history, belong to this period. In art, sculpture, painting and engraving upon gems are represented by celebrated works of undiminished excellence.

Arrian, who used the contemporary writers Ptolemy, Aristobulus, Nearchus, is the chief authority for Alexander's reign; Curtius, Plutarch and Diodorus being subsidiary. Afterwards we depend upon Diodorus XVII-XXI (unabridged as far as the year 301 B.C.), with scanty and irregular supplements from Plutarch (*Phocion*, *Eumenes*, *Demetrius*, *Pyrrhus*), Justin, Pausanias and Strabo.

Civil Events

Literature and Art

- 327/6 Death of Timoleon.
 Ol. 110. 4 Assassination of Philip. Accession of
 Phrynichus Alexander (—323) and of Darius III
 336/5 Codomannus (—331).
 Ol. 111. 1 335 *Spring*. Alexander's expedition
 Pythodelus against the Triballi and Illyrians.
 335/4 *Autumn*. Revolt and destruction of
 Ol. 111. 2 Thebes.
 Euaenetus 334 Macedonian invasion of Asia
 Minor. Battle of the GRANICUS.
 334/3 The Greek cities in Asia welcome
 Ol. 111. 3 Alexander, who sets up democracies.
 Ctesicles Storm of Miletus: siege and capture
 of Halicarnassus.
 333/2 Alexander the Molossian in Italy as an
 Ol. 111. 4 ally of the Tarentines (—330).
 Nicocrates 333 *Nov.* Battle of ISSUS.
 332 Submission of Phoenicia except
 Tyre and Gaza.
 332/1 *Nov.* Capture of Tyre after seven
 Ol. 112. 1 months' siege.
 Nicetes 331 Capture of Gaza. Foundation of
 Alexandria. March to Nineveh.
 331/0 Battle at GAUGAMELA, 30 miles west
 Ol. 112. 2 of Arbela (*Oct.*).
 Aristophanes Babylon, Susa, Persepolis occupied.
 330/29 Darius slain by Bessus.
 Ol. 112. 3 Rising in Peloponnesus. The Spartans
 Aristophon defeated by Antipater and Agis slain
 in Arcadia.
 Alexander marches from the Caspian to
 Paropamisadae [Cabal].
 329/8 Alexander invades Bactria and Sogdiana
 Ol. 112. 4 [Bokhara] crossing Paropamisus
 Cephisophon [Hindu Kush].
 327/6 Invasion of India. Defeat and sub-
 Ol. 113. 2 mission of Pornus.
 Hegemon Dearth at Athens.
 326/5 Alexander returns from the Hyphasis
 Ol. 113. 3 [Sutlej] and marches along the Indus
 Chremes to the Indian Ocean.
 325/4 Land march, with heavy loss, through
 Ol. 113. 4 Gedrosia [Baluchistan]. Voyage of
 Anticles Nearchus to the Persian gulf.
 324/3 Decree for return of the Greek exiles
 Ol. 114. 1 announced at the Olympic games.
 Hegesias Flight of Harpalus, satrap of Baby-
 lon, with treasure to Athens.
 323 Death of Alexander (*June*), aged
 32 years and 8 months.
 323/2 First settlement: Perdiccas regent for
 Ol. 114. 2 Alexander's heir.
 Cephisodorus Revolt in Greece headed by Athens
 and Aetolians. Antipater shut up in
 Lamia. **The LAMIAN WAR.** Ophelas
 established in Cyrene.
 322 *Spring*. The insurgent Greeks
 defeated by Antipater at Crannon.
- Artists contemporary with Alex-
 ander :
 Lysippus of Sicyon, cele-
 brated for his statues in bronze
 (the *Apoxyomenos*, the colosal
Zeus of Tarentum, the
Poseidon of the Isthmus) and
 for portrait statues of Philip
 and Alexander: the painters
 Apelles of Colophon (*Aphro-
 dite Anadyomené*) and Proto-
 genes of Caunus (*Jalysus, Satyr
 with double flute*) and Pyrgo-
 teles, engraver on gems.
 336/5 [Demosthenes] *Or. 17, On
 the treaty with Alexander.*
 335 Aristotle settles at Athens
 and teaches in the Lyceum
 (—323), his philosophical
 works being closely connected
 with his activity as a teacher.
- 330 Lycurgus' *Or. Against Leo-
 crates.*
Autumn. The case of the Crown
 heard at Athens: Aeschines,
Or. 3, Against Ctesiphon, and
 Demosthenes, *De Corona.*
 330/29 Callippus published his
 astronomy.
- 327 First victory of Philemon,
 poet of the New Comedy (359
 —262). To him 97 plays were
 attributed.
 Death of Callisthenes of Stagirus,
 relative of Aristotle, who had
 accompanied Alexander as his-
 torian and was accused of con-
 spiracy.
 326/5 [Dem.] *Or. 34, Against
 Phormion.*
 324 Death of Lycurgus. Dein-
 archus' and Hypereides'
 speeches against Demosthenes
 in the affair of Harpalus. Con-
 demnation of Demosthenes
 and Demades. Exile of De-
 mosthenes.
 323 Epicurus, *aetat.* 18, comes
 to Athens.
 322 *Oct.* Death of Hypereides
 and Demosthenes. Death of
 Aristotle at Chalcis. Theo-
 phrastus succeeds him in the
 Lyceum.

Civil Events

Literature and Art

- Victory of Cleitus over the Athenian fleet off Amorgos.
- 322/1**
Ol. 114. 3
Philocles
Change of constitution at Athens: the poorer citizens disfranchised and deported.
- 321** *Spring*. Resistance to Perdicas and Eumenes offered by Antipater, Antigonus, and other satraps.
Death of Perdicas in Egypt.
Second settlement at Triparadeisus in Syria. Antipater regent: Antigonus commander of the forces against Eumenes.
- 319/8**
Ol. 115. 2
Apollodorus
Death of Antipater. War between his son Cassander and his successor Polyperchon.
- 318/7**
Ol. 115. 3
Archippus
Polyperchon declares the Greeks free.
- 317/6**
Ol. 115. 4
Demogenes
317 Cassander recovers Athens. Death of Phocion (*April*).
Demetrius of Phalerum in power at Athens (—307): further changes in the constitution. Arrhidaeus, nominal ruler, put to death by Olympias. Agathocles becomes tyrant of Syracuse.
- 316/5**
Ol. 116. 1
Democles
315 *Spring*. Eumenes betrayed and slain.
Coalition of the other satraps for war against Antigonus (—311).
Thebes rebuilt by Cassander, now master of Macedonia.
- 312/1**
Ol. 117. 1
Polemon
Battle of Gaza; Ptolemy defeats Demetrius Poliorcetes, son of Antigonus. Selencus returns to Babylon. Era of the Selencids.
- 311** The satraps make peace with Antigonus.
The freedom of the Greek cities recognized.
- 311/10**
Ol. 117. 2
Simonides
Hamilcar lands in Sicily and defeats Agathocles at Ecnomus near the river Himera.
Siege of Syracuse.
- 310/9**
Ol. 117. 3
Hieronymemon
Agathocles invades Africa (*Aug. 15, 310*) and captures Tunes and Hadrumetum.
- 309/8**
Ol. 117. 4
Demetrius
In Sicily Hamilcar is captured and slain. Ophelas of Cyrene murdered: his troops join Agathocles.
- 308/7**
Ol. 118. 1
Charinus
[or Caerimus
Mar. Par.]
Utica taken by Agathocles who returns to Sicily, leaving his son Archagathus in command.
Magas seizes Cyrene and maintains his power till his death (—258).
- 307** Demetrius Poliorcetes drives out Cassander's garrison and 'liberates' Athens 25 Thargelion (June).
- 321** Menander's first play. (He is said to have written 105 in all.) His contemporary Diphilus of Sinope also wrote 100 plays.
- 319** Execution of Demades, the most fluent orator of the Macedonian party.
- 315** First victory of Menander.
- 314** Death of Aeschines and of Xenocrates. Zeno of Citium, *aetat. 22*, comes to Athens and commences the study of philosophy. Polemo head of the Academy (—276).
- 312** Timaeus of Tauromenium, the historian of Sicily (345—249), removes to Athens, where he settles until 262.
- c. **312** Theocritus born probably in Cos.
- c. **310** Timon of Phlius born.
- c. **310** Birth of Callimachus of Cyrene.
- 307** Deinarchus of Corinth, last of the ten orators, retires to Chalcis (—292).
- 307/6** Law of Sophocles of Sunium against the philosophers (rescinded the next year).
- 306** Epicurus, having taught since 314 in Asia, returns to Athens and opens a school.
- 306** Megasthenes, envoy of Seleucus at Palibothra, the court of Sandracottus, *i.e.* Chandragupta (—298).
- Rhinton of Tarentum, author of burlesques (*hilarotragoedia*).

Civil Events

Literature and Art

- 307/6** Agathocles, unable to raise the siege of Tunes, abandons his son and his army and escapes to Sicily. End of his African invasion.
- 306/5** The 'four-years war' between Demetrius and Cassander for the possession of Greece (—302).
- 305/4** Great naval victory of Demetrius over Ptolemy off Salamis in Cyprus. Antigonus and his rivals assume the title of kings.
- 302/1** Agathocles makes peace with Carthage, and after defeating Deinocrates at Torgium admits him to a share of power.
- 301/0** Demetrius lays siege to Rhodes.
- 297/6** Second coalition of the other kings against Antigonus and Demetrius.
- 296/5** Antigonus defeated and slain at Ipsus in Phrygia.
- 295/4** Seleucus and Lysimachus, the victors, divide his possessions.
- 294/3** Agathocles conquers Corcyra. Death of Cassander.
- 293/2** Lachares tyrant of Athens.
- 292/1** Demetrius, having expelled Lachares, enters Athens in triumph (*March*). He conquers the Spartans and wins Megara and most of Peloponnesus.
- 291/0** Pyrrhus made king of Epeirus. Demetrius becomes king of Macedonia (—287). He holds Athens with a garrison. Death of Agathocles.
- 289/8** Demetrius driven by Pyrrhus from Macedonia. (Ultimately Demetrius becomes a prisoner of Seleucus and dies in 282.) Administration of Demochares, the nephew of Demosthenes (—270).
- 288/4** Lysimachus defeats Pyrrhus and expels him from Macedonia.
- 287/6** Ptolemy Philadelphus succeeds his father in Egypt (—247).
- 286/5** Lysimachus is defeated and slain at the battle of Corupedium by Seleucus, who proceeds to Macedonia where he is murdered by Ptolemy Cerannus. Pyrrhus is invited by the Tarentines to aid them against Rome.
- 300/299** Epicurus completes Book xv of his great work *On Nature* (and four years later Book xxviii).
- 297** Death of Euhemerus of Messene, author of a rationalist explanation of the myths (*περὶ ἀναγραφῆς*).
- 295** Philetas of Cos (340—285), elegiac poet, tutor of Ptolemy Philadelphus (—292).
- 294** Zeno begins to teach in the Stoa at Athens.
- 293/2** Fl. Hieronymus of Cardia (360—260), historian of the Diadochi and Epigoni (Alexander's successors of the first and second generations).
- 292/1** Death of Menander.
- 288** Poseidippus of Cassandria exhibits his first play. Contemporary dramatists Apollodorus of Carystus; Philippides of Athens, author of 44 plays; and Machon of Corinth or Sicyon, who lived and wrote at Alexandria.
- 288/4** Death of Theophrastus; Strato of Lampsacus head of the Peripatetic school (—270).
- 287** Birth of Archimedes at Syracuse.
- 285** Fl. Herophilus of Chalcedon and Erasistratus of Ceos, eminent amongst the ancient physicians for their anatomical discoveries.
- At the court of Ptolemy Philadelphus flourished Callimachus, elegiac poet, and Theocritus. Alexander the Aetolian, elegiac and tragic poet, Sositphanes of Syracuse, Sosithens of Alexandria in the Troad, Homer of Byzantium, Lycophron of Chalcis, Philiscus of Corcyra and Dionysius of Mallus (or Tarsus) were tragic poets known as the constellation, *ἡ Πιλλεάς*. Hermesianax of Colophon, elegiac poet, Gotades of Maroneia in Crete.
- 281/0** Aristarchus of Samos, originator of the heliocentric hypothesis, makes astronomical observations at Alexandria. The *Histories* of Duris of Samos (c. 340—260) which began with 370 went as far as this year. He also wrote a history of Agathocles.

F. THE THIRD AND SECOND CENTURIES B.C.

126. The invasion of the Gauls was successfully repelled from Delphi, Macedonia, which had suffered more from their ravages, was gradually consolidated under the rule of Antigonus Gonatas, who in the Chremonidean war, in spite of the vigorous resistance of Sparta and Athens, reduced Greece once more to complete dependence. Meanwhile the Achaean League had grown from small beginnings to prosperity, and the prudent policy of Aratus sought to extend it over Peloponnesus. But in the struggle with Sparta, under the reforming king Cleomenes, it was defeated. Thereupon Aratus called in Macedonian intervention, and Antigonus Doseon crushed the Spartan power at Sellasia.

In the west, Pyrrhus of Epeirus had hoped to found a kingdom, either in Italy or Sicily. He nearly succeeded in driving the Carthaginians from the island, but by his return to Italy forfeited his influence with the Sicilian Greeks. After the failure of his enterprise Rome completed the conquest of Magna Graecia; the Mamertines possessed themselves of Messina and the Carthaginians reconquered the west and north of Sicily, but Syracuse and the east coast enjoyed comparative prosperity under Hieron II.

This is the Alexandrian age in literature: the Rhodian and Pergamene schools of sculpture become famous.

For this period Plutarch (*Pyrrhus, Agis, Cleomenes, Aratus, Philopoemen*), Justin, Diodorus XXII—XXV, Polybius, in the introduction to his own special period, Books I—III, and the *Epitome* of Livy XII—XX, are the more important among numerous fragmentary sources of information.

	<i>Civil Events</i>	<i>Literature and Art</i>
280/79 Ol. 125. 1	The Achaean League revived by the union of Dyme, Patrae, Tritaea and Pharae. The Gauls in Macedonia and Thrace: Ptolemy Ceraunus slain: anarchy. Pyrrhus in Italy defeats the Romans at Heraclea.	280/79 Chrysippus born. 278/7 Chares of Lindus head of the Rhodian school of sculpture: the Colossus his work.
279/8 Ol. 125. 2	Irruption of the Gauls into Greece: Breunus defeated before Delphi. Apollodorus tyrant of Cassandreia. Pyrrhus sails for Syracuse.	277/6 Death of Metrodorus of Lampsacus, pupil of Epicurus. Aratus' <i>Hymn to Pan</i> . Theocritus at Cos writes <i>Id.</i> 7.
278/7 Ol. 125. 3	Victory of Antigonus Gonatas over one Gallic troop at Lysimacheia. Other tribes of Gauls cross into Asia, where they enter the service of Nicomedes, king of Bithynia.	275/4 Birth of Eratosthenes of Cyrene and Enphorion of Chalcis (Ol. 126). Timon of Phlius (c. 320—230) settles at Athens where he writes philosophical satires in the form of epic parodies (Σιλλοί).
277/6 Ol. 125. 4	Antigonus Gonatas becomes king of Macedon (—239).	272/1 At the court of Antigonus Gonatas flourish Antagoras of Rhodes, epic poet, Aratus, author of the <i>Phaenomena</i> ; Persaeus, favourite pupil of Zeno, and Menedemus of Ere-
275/4 Ol. 126. 2	Return of Pyrrhus to Epeirus.	
272/1 Ol. 127. 1	Death of Pyrrhus at Argos. Milo surrenders Tarentum to the Romans.	

Civil Events

Literature and Art

- 270/69 Hiero II king of Syracuse (—216).
 Ol. 127. 3
 266/1 **The Chremonidean war.** Macedon suppresses a revolt in Athens and Megara, which was supported by Areus of Sparta and by Patroclus, admiral of Philadelphus. Siege of Athens which capitulates to famine 261 (Spring) and receives a Macedonian garrison (removed 255).
 —Ol. 129. 2
- 259/8 At Cyrene on the death of Magas Demetrius the Fair rules until his murder (some date this 250/47).
- 251/0 Aratus, *aetat.* 20, liberates Sicyon and unites it to the Achaean league.
 Ol. 132. 2
c. 250 Rise of Arsaces and the Parthian kingdom.
- 247/6 Accession of Ptolemy III Euergetes (—222). Cyrene joined to Egypt.
 Ol. 133. 2
- 243/2 Corinth and Megara join the Achaean League. The Macedonian garrison expelled from Acrocorinthus.
 Ol. 134. 2
- 242/1 Agis IV attempts to restore the Lycurgian constitution at Sparta, and deposes his colleague Leonidas, who is banished.
 Ol. 136. 3
- 241/0 Return of Leonidas. Death of Agis: his reforms are abrogated. At Pergamum accession of Attalus I (—197).
 Ol. 134. 4
 End of the first Punic war: Carthaginian Sicily ceded to Rome.
- 239/8 Accession of Demetrius II of Macedon (—229).
 Ol. 135. 2
- 233/2 Lydiadas resigns his tyranny. Megalopolis joins the Achaean League.
 Ol. 136. 4
- 232/1 Illyrian raids in Epeirus and Acarnania. Corcyra occupied by Demetrius of Pharus.
 Ol. 137. 1
- 229/8 Accession of Antigonus Dison, guardian of Philip V of Macedon (—221). Athens liberated by Aratus. Rome makes war on the Illyrians.
 Ol. 137. 4
- tria, philosophers. Theocritus at Alexandria, *Id.* 14, 15, 17, *c.* 273—269; afterwards he returns to Syracuse, *Id.* 16.
- 271/0 Death of Epicurus (*Jan.* 270). On the death of Strato (Ol. 127) Lyco becomes head of the Lyceum (—226). About this time Zenodotus of Ephesus librarian at Alexandria prepares an edition of *Homer*. Sosibius the Laconian historian flourished under Ptolemy I and II.
- 270/69 Death of Polemon who is succeeded in the Academy by Crates and shortly afterwards by Arcesilas, founder of the Middle or Sceptical school. Bion of Smyrna, idyllic poet in Sicily.
- 262/1 Philochorus of Athens brings his *Attic History* in 17 books down to this year, the accession of Antiochus Theos. He is shortly afterwards executed.
- 261 (after July) Death of Zeno of Citium. Cleanthes of Assos succeeds to the headship of the Stoic school (—232).
- 251/0 Death of Timaeus of Tauromenium. Manetho of Sebennytus, the Egyptian historian, and (?) Herodas or Herondas of Cos, author of *Mimiambics*, flourish.
- 247/6 Nymphis of Heraclea brought his history of Alexander and his successors down to this year. Menippus of Gadara, Cynic philosopher, and author of satires in prose and verse.
- 245/4 Callimachus of Cyrene, long resident at Alexandria is engaged upon the compilation of the *Iliakes* in 120 books. Apollonius (*c.* 280—200), author of the *Argonautica*, had probably already left Alexandria for Rhodes in consequence of his quarrel with Callimachus.
- 243/2 Death of Persaeus.
- 241/0 Death of Arcesilas of the Middle Academy.
c. 240? Neanthes of Cyzicus,

Civil Events

Literature and Art

- | | | |
|---|---|--|
| <p>223/7
Ol. 138. 1</p> <p>227/6
Ol. 138. 2</p> <p>226/5
Ol. 138. 3</p> <p>225/4
Ol. 138. 4</p> <p>224/3
Ol. 139. 1</p> <p>223/2
Ol. 139. 2</p> <p>222/1
Ol. 139. 3</p> <p>221/0
Ol. 139. 4</p> | <p>Submission of Tenta, the Illyrian queen. Adhesion of Argos, Hermione and Phlius to the Achaean League.</p> <p>The Romans admitted to Hellenic games and festivals. Cleomenes III king of Sparta.</p> <p>Cleomenes removes the ephors and carries out the Lycurgean reforms at Sparta. A new division of land among 4000 hoplites.</p> <p>Victory of Cleomenes over the Achaeans at Dyme.</p> <p>Continued success of Cleomenes: capture of Pellene and Argos; secession of Cleonae, Phlius and Corinth from the Achaean League. Earthquake at Rhodes.</p> <p>Cleomenes besieges Acrocorinthus and Sicyon. Aratus negotiates with Antigonus Doson who sends a force into Peloponnesus.</p> <p>Antigonus conquers Tegea, Orchomenus, Mantinea. Cleomenes destroys Megalopolis. Accession of Antiochus III Epiphanes.</p> <p>Utter defeat of Cleomenes by Antigonus and the Achaeans at Sellasia. Death of Antigonus Doson. Accession of Philip V (—178).</p> | <p>rhetor and historian, fl. He wrote <i>Hellenica</i>, a <i>Chronicle of Cyzicus</i> (ἱστορίαι) and a biographical work (περὶ ἐνδοξῶν ἀνδρῶν).</p> <p>235/4 Eratosthenes librarian at Alexandria (—195).</p> <p>232/1 Chrysippus head of the Stoic school (208—4: Ol. 143).</p> <p>227/6 Sphaerus of Bosphorus, sent by Cleanthes to Ptolemy III, aids Cleomenes in his reforms.</p> <p>226/5 Antigonus of Carystus, sculptor, art critic, and biographic historian of philosophy at the court of Attalus I, publishes his <i>Lives</i> about this time.</p> <p>222/1 Rhianus of Bene in Crete published a new edition of <i>Homer</i>, and wrote antiquarian epics, e.g. <i>Messeniacae</i>.</p> <p>221/0 The <i>Memoirs</i> of Aratus ended with 220: Phylarchus of Naucratis wrote a history in 28 books, beginning at 272 and also ending with this year.</p> |
|---|---|--|

127. The Achaean League, now the dependent ally of Philip V of Macedonia, was assisted by him against the Aetolian League in the Social war. The war came to an end because both sides wished to be free to wait upon events in the second Punic war. Syracuse and Tarentum both fell into the hands of the Carthaginians and were afterwards retaken by the Romans. Philip having made a treaty with Hannibal, Rome replied by raising up enemies against him at home—the Aetolians, Rhodes, Pergamum. After Zama, when their hands were free, the Romans humbled Philip: at Cynoscephalae the phalanx gave way before the legion. While Macedonia was in any sense formidable, Rome treated the states which from time to time were allied with her—Aetolians, Achaeans, Rhodes, Pergamum—with consideration and occasionally with generosity. When the final victory over Perseus was gained at Pydna, these allies were no longer wanted. Rome made no scruple to invade their rights and interfere with their domestic affairs on any pretext. In the case of the Achaeans this policy at last provoked the senseless outbreak of the Anti-Roman party which ended in the destruction of Corinth and the dissolution of the League.

This is the classical age of Alexandrian and Pergamene scholars and critics.

The Roman
domination:
220—146.

Our chief authority for this period, directly or indirectly, is Polybius: Livy in the Greek sections of XXI—XLV usually follows him; so also does Appian. Subsidiary sources are Plutarch's *Lives of Philopoemen, T. Quinticius, Cato the Censor, and Aemilius Paulus*, together with Justin and Diodorus XXVI—XXXII, as before.

*Civil Events**Literature and Art.*

- | | | |
|-----------------------|--|--|
| 220/19
Ol. 140. 1 | The Social war: the Aetolian League with Elis and Sparta against the Achaean and Boeotian Leagues, and Philip of Macedonia. | 220/19 Polybius' history begins here. |
| 218/7
Ol. 140. 3 | Philip sacks Thermum. [<i>Hannibal marches into Italy.</i>] | |
| 217/6
Ol. 140. 4 | Peace made between the Leagues. [<i>Trasimene.</i>] | |
| 216/5
Ol. 141. 1 | [<i>Cannae.</i>] Philip's treaty with Hannibal (215). | |
| 212
Ol. 142. 2 | 212 Fall of Syracuse.
First Macedonian war (—205). Rome, the Aetolian League, and Attalus of Pergamum against Philip and his Greek allies. | 212/1 Death of Archimedes.
c. 210—206 Birth of Polybius.
Death of Chrysipus between 208 and 204 (Ol. 143). Zeno of Tarsus the next head of the Stoic school. |
| 205/4
Ol. 143. 4 | The Aetolians make peace with Philip. | 202/1 Birth of Nicander of Colophon, didactic poet. |
| 200/199
Ol. 145. 1 | 202 [<i>Zama.</i>]
Philip captures Abydos. Second Macedonian war (—197). | 200/199 Fl. Hermippus of Smyrna, biographer. |
| 198/7
Ol. 145. 3 | The Achaean League now allied with Rome against Philip and the Aetolians. | |
| 197/6
Ol. 145. 4 | Flamininus defeats Philip at CYNOSCEPHALAE. Peace made. The freedom of the Greek cities proclaimed at the Isthmian games (196). Eumenes II succeeds Attalus I at Pergamum. | 197/6 Attalus dedicated four sets of figures (Giants, Amazons, Persians, Gauls) on the Acropolis at Athens to commemorate his victories over the Gauls (by Epigonus, or copies of his work). |
| 195/4
Ol. 146. 2 | Rome and the Achaeans make a joint campaign against Nabis, tyrant of Sparta. | 195/4 Death of Eratosthenes. Aristophanes of Byzantium librarian at Alexandria. |
| 192/1
Ol. 147. 1 | Murder of Nabis. Sparta is won for the Achaeans. Antiochus, at the invitation of the Aetolians, crosses the Aegean and winters at Chalcis. Outbreak of the Syrian war (—189). The Syrians are defeated at Thermopylae and evacuate Europe. | |
| 190/89
Ol. 147. 3 | After the battle of Magnesia the Romans make peace with Antiochus, who is confined to his dominions east of Mount Taurus. Rhodes and Pergamum, the allies of Rome, rewarded with territory. | 190/89 The Pergamene school of sculpture under Eumenes and Attalus II: Apollonius and Tauriscus of Tralles; the <i>Farnese Bull.</i> |
| 189/88
Ol. 147. 4 | The Aetolians forced to accept heavy terms. | Between 183 and 174 the great marble altar at Pergamum with the Gigantomachia. |
| 188/7
Ol. 148. 1 | Discontent in Sparta; Philopoemen abolishes the last remains of the Lyncurgen Constitution. | |
| 186/5
Ol. 148. 3 | Roman interference with the Achaeans. | |
| 183/2
Ol. 149. 2 | The Messenians under Deinocrates revolt against the Achaean League: | |

*Civil Events**Literature and Art*

- death of Philopoemen. Messene is reconquered by the Achaeans.
- 180/79** **The Romans insist on the restoration of the Spartan exiles: embassy of Callimachus, the younger Aratus and Lydiadas to deprecate this measure.**
- 179/8** **Death of Philip V and accession of Perseus (—168) in Macedon.**
- 177/6** **Gradual interference of the Romans with the Rhodians.**
- 172/1** **Third Macedonian war (—168).**
- 152. 1** **Success of Perseus. Licinius defeated near Larissa.**
- 171/0** **Success of Perseus. Licinius defeated near Larissa.**
- 152. 2** **Success of Perseus. Licinius defeated near Larissa.**
- 169/8** **Success of Perseus. Licinius defeated near Larissa.**
- 157. 4** **Success of Perseus. Licinius defeated near Larissa.**
- 168/7** **Success of Perseus. Licinius defeated near Larissa.**
- 153. 1** **Success of Perseus. Licinius defeated near Larissa.**
- 156/5** **Raid of the Athenians upon Oropus. Embassy of Carneades, Critolaus and Diogenes to Rome on behalf of Athens (155).**
- 151/0** **The survivors of the deported Achaeans released.**
- 157. 2** **The survivors of the deported Achaeans released.**
- 149/8** **War of the Achaeans against Sparta, which appeals to Rome. Insurrection in Macedonia in favour of a pretended Philip.**
- 157. 4** **War of the Achaeans against Sparta, which appeals to Rome. Insurrection in Macedonia in favour of a pretended Philip.**
- 147/6** **L. Aurelius Orestes sent by the Roman Senate to Greece to authorize secession from the Achaean League. Subsequent mission of S. Iulius Caesar: Critolaus, at the head of the anti-Roman party, induces the League to declare war nominally with Lacedaemon, really with Rome. Metellus defeats the Achaeans at Scarpheia. Mummius, his successor, arrives and destroys Corinth. Polybius after the defeat exerts himself to procure for his countrymen the best terms possible.**
- 180/79** **Death of Aristophanes: Aristarchus of Samothrace, the grammarian, librarian at Alexandria. Contemporary geographer and antiquarian, Polemon of Ilium. Sotion's history of the philosophers (between 200 and 170).**
- 171/0** **About this time Crates of Mallus grammarian and critic at Pergamum. A younger Neanthes of Cyzicus must be assumed to have written the history of Attalus I (241—197). Perhaps also a treatise against the Asian school of rhetoric (*περὶ ἡλιουπίας*).**
- 167/51** **Polybius the historian at Rome becomes acquainted with the younger Scipio and Panaetius the Stoic.**
- c. 155** **Carneades (213—129) was the head of the New or Sceptical Academy. Diogenes of Seleucia 'the Babylonian' was head of the Stoics, and Critolaus of the Peripatetics.**
- 151/0** **Demetrius of Scepsis, antiquarian, flourishes.**
- 147/6** **End of Polybius' history.**

III. LITERATURE, PHILOSOPHY, SCIENCE.

III. 1. LITERATURE.

A. EPIC POETRY.

128. THE Homeric poems, with which the literature of Greece and of Europe begins, are works of a matured poetical art. Little is known concerning the earlier and ruder stages in the Greek development of that art. But three forms, at least, of primitive Greek poetry are traceable. Primitive
Greek poetry.

(1) There were old folk-songs, connected with the natural phenomena of the seasons, in which the yielding of spring to summer, of summer to autumn and winter, was symbolised by the death of a beautiful youth, such as Linus, Hylas, Ialemus, Hyacinthus or Adonis. Their origin appears to have been Semitic; but they were congenial to that early phase of the Indo-European mind which in India is represented by the Vedic hymns, and in which religion was largely a sense of divinity in the forces of external Nature. The local legends as to the personal relationships of the youth who had perished show the distinctively Greek element.

(2) Then there were legends of early bards,—shadowy names of ancient but vague renown, to which later composers attached their own work. Among these we can distinguish: (a) a Thracian group, associated with the Muses, the goddesses of memory or record, whose cult spread from the northern coasts of the Aegean to the district of Pieria in the north-east of Thessaly, and thence southward to the Boeotian Helicon and the Phocian Parnassus. To this group belonged Orpheus and his disciple Musaeus, who was said to have passed from Pieria into Boeotia; also three bards associated with a mystic cult of Demeter,—Eumolpus (at Eleusis), Pamphos (in Attica), and Philammon (at Delphi). Thamyris, 'son of Philammon,' figured as the latest of the Pierian poets; legend linked him with Delphi, and sent him into Messenia. (b) A group devoted to Apollo, and indicating a stream of influence which passed from Asia Minor, through the Aegean islands, to Greece Proper. To this belonged the Lycian Olen (Ὠλήν), famed at Delos, and Chrysothemis of Crete.

The cult of the Muses and the cult of Apollo thus represent the two main currents of primitive religious poetry in Greece. That sacred poetry took

the form of *hymns* invoking and praising the deities. Apollo's worship must have given the larger scope to progress in metrical and musical art: his was the cithara; and his servant Olen was said to have 'invented' the hexameter. The hymn to a god gave type and model for the earliest lay in praise of a hero.

(3) The Homeric poems mention lays about the deeds of heroes (*κλέα ἀνδρῶν*), the material out of which the maturer epic poetry directly grew. They tell also of the *hymenæus*, or marriage-chant, and the *thrénus*, or dirge,—not, as in ancient India, parts of a ritual, to be sung by priests, but already secular, and sung by the people.

129. The idea of 'Epic' poetry, as the Greeks understood it, is most clearly expressed by Aristotle. It may be defined, in the first instance, by its differences from 'lyric' (or 'melic') and 'dramatic.' There was a time when epic poetry was chanted to a musical accompaniment; but the Greeks of the fifth and fourth centuries associated it with recitation, and distinguished it, therefore, from lyric, as poetry which was recited, not sung to music. As distinguished from 'dramatic,' it was poetry which merely narrated (*ἡ διηγηματικὴ*, *Poet.* xxiii), and 'imitated' life by means of verse only (*ἐν μέτρῳ μιμητικὴ*, *ib.*), without help from action (*τὸ πράττειν*). Aristotle calls Epic poetry *ἡ ἐποποιία* (the making of *ἔπη* as distinguished from that of *μέλη* or *δράματα*): he does not use the word *ἐπικός*, which became current only in later times. In an epic poem, Aristotle demands (1) a dignified theme, (2) organic unity, and (3) an ordered progress. The events must form a connected series, and must all conduce to the end. To Aristotle, Homer is at once the earliest of poets and the most finished of epic artists.

130. In approaching the *Iliad* and the *Odyssey*, it is well to have in mind the general plan of each poem, as it now exists. The *Iliad* (15,693 lines) derives its unity, not simply from the person of the central hero, but from his wrath (*μῆνιν ἄειδε, θεά*). The story falls naturally into three chapters. (1) Books 1—IX: Achilles is affronted by Agamemnon, and withdraws in sullen anger from the war; the Greeks are discomfited, and finally sue to Achilles, who remains inexorable. (2) Books X—XVIII: after much fighting and varied fortune, the Greeks are again reduced to extremities; Patroclus takes the field in the armour of Achilles, and, after driving the Trojans from the ships, is slain. Achilles is stricken with sore grief; at the prayer of his mother Thetis, the god of fire, Hephaestus, fashions new armour for him. (3) Books XIX—XXIV: Achilles renounces his wrath, returns to the warfare, and slays Hector: Priam, led by the god Hermes, ransoms the corpse of his son from the victor, and takes it back to be mourned and buried at Troy.

The *Odyssey* (12,110 lines) derives its unity from the person of Odysseus (*ἄνδρα μοι ἔννεπε, Μοῦσα*); and that unity is of a stricter kind

than exists in the *Iliad*. The epic may be divided into groups of four books. (1) I—IV. The adventures of Telemachus. (2) V—VIII. The adventures of Odysseus, after leaving Calypso's isle, till he reaches Phaeacia. (3) IX—XII. The previous adventures of Odysseus. (4) XIII—XVI. Odysseus at the hut of Eumaeus in Ithaca. (5) XVII—XX. The return of Odysseus to his house. (6) XXI—XXIV. The vengeance on the suitors, and the hero's re-establishment in his realm.

131. The *Iliad* is an epic of warfare and debate, full of energy, of splendour, and of tragic pathos: the *Odyssey* derives its charm from narrative of wondrous adventure, and from description of social life; in respect to each, it moves in a region almost wholly foreign to the *Iliad*; it is picturesque, rich in fancy, fertile in scenes of a tender and delicate beauty. But, with all their differences, these two great epics have, in the larger sense, a common stamp, which broadly separates them from all other compositions. They are akin in their way of presenting ideal human types, such as Achilles and Odysseus; they are akin in their way of blending divine with human action. And they are, further, inseparable in respect to certain qualities of form and style, which no other poetry unites in the same manner or the same degree.

Character of
Homeric
poetry.

This distinctively Homeric character consists, on the one hand, in a certain freshness and simplicity which (for us, at least) represent the poetical aspect of a primitive age; and, on the other hand, in a complete immunity from the defects which belong to the primitive stage in literature. The best traits of the best old ballads are here, but without their frequent rudeness of form, their occasional lapses into grotesque or ignoble modes of speech, their want of sureness in the equable maintenance of a high level. Here, also, are the dignity and the finished eloquence of the literary epic, but without its artificialism, its besetting monotony, and its sometimes slow movement. This was the character which Matthew Arnold well summed up, when he said that the Homeric style has four ever-present 'notes': it is rapid; plain in thought; plain in diction; and noble.

The difficulty of uniting these qualities, as Homer unites them, is illustrated by some of Homer's translators. Cowper fails to be rapid; Chapman, Homeric in many things, is too much imbued with the 'conceits' of his age to be plain in thought (*e.g.* he renders ὄταν ποτ' ὀλώληγ Ἰλιος ἱρή, 'When sacred Troy shall shed her tow'rs, for tears of overthrow'); Pope fails to be plain in diction; William Morris misses the Homeric nobleness, when he renders the first words of the *Odyssey* by, 'Sing me, O Muse, of the shifty.' The Homeric nobleness, it should be observed, is a far more flexible and versatile quality than the majesty of the literary epic; it is as much at home, as unailing, and as appropriate, in the homeliest scenes of the *Odyssey* as it is in any passage of the *Iliad*.

132. There is no instance on record in which the educative power of national poetry over a national mind has been so direct or so large as in the case of the Homeric poetry. Homer, says Plato, was described by his admirers as 'the educator of Hellas.' And there was a good deal of literal truth in the claim. In Xenophon's *Symposium* (3. 5) one of the guests,—a fair type, it may be supposed, of the ordinary Greek of his class and age,—is made to say:—'My father, anxious that I should become a good man, made me learn all the poems of Homer.' In another chapter (4. 6) of the same piece we read, 'Homer, the prince of poets, has treated almost all human affairs. If any one of you, then, wishes to become a prudent ruler of his house, or an orator, or a general, or to resemble Achilles, Ajax, Nestor, or Odysseus,' let him study Homer. The Greeks of the classical age were accustomed, indeed, to regard all poetry more or less from a didactic point of view. To them, the poet was especially a teacher. Aristophanes often expresses this view of his own work, and is true to orthodox Greek sentiment when he enumerates the lessons, in one or another province, which may be learned from the oldest poets (*Frogs* 1030 ff.). 'Homer,' oldest and foremost of poets, was also the greatest of the teachers. The Homeric influence is not only all-pervading in Greek literature, but enters also into every part of Greek life.

Herodotus (11. 53) speaks of Homer and Hesiod as having created the Greek theogony. The Homeric poems traced types of divine character which had an enduring influence on the Greek imagination. They also presented old legends about the gods in a form from which an artistic instinct had purged away the grossest elements. And by that beauty and majesty with which Homeric poetry often invests the greater deities, it did the Greeks an inestimable service; it made them conscious that their own religious sense was higher than their mythology.

Further, it should not be forgotten that, for the Greeks of the classical age, Homer was an historian. Such a view of him is common to minds so different as those of Herodotus and Thucydides. Appeals to the historical authority of Homer are not infrequent in Greek literature.

133. Besides the two famous epics, many other poems were commonly attributed to 'Homer.' Callinus (*circa* 660 B.C.) believed Homer to have composed the epic *Thebais* (Paus. ix. 9. 5). Herodotus leaves it an open question whether Homer is or is not the author of the *Epigoni* (iv. 32). Homer's name, apparently, could easily be attached to any epic of sufficient merit, especially if it concerned Troy or Thebes. But this was not all. The hymn to the Delian Apollo is regarded by Thucydides as the work of Homer. The satirical poem *Margites* is ascribed to Homer by Aristotle. The parody called the *Batrachomyomachia* (probably written *c.* 490 B.C.) also passed as Homer's. To him, too, were ascribed the *Epigrams*,—16 short pieces or fragments, of various classes and ages, in hexameter verse; the places

Influence of
the Homeric
poems.

Works as-
cribed to
Homer.

mentioned in them (except Arcadia in no. 16) all belong to the west coast of Asia Minor. The opinion that the *Iliad* and the *Odyssey* are the only genuine works of Homer dates only from the Alexandrian age, and perhaps did not become fixed before the time of Aristarchus.

134. The ancient notices of Homer's life appear to have been founded on poems attributed to him. This is clearly so as to the legends about his birth-place; e.g. the claim of Colophon rested on the *Margites*, and that of Chios on the Delian hymn. The extant *Βίου Ὁμήρου* are in no case older than the Christian era: that in Ionic, which bears the name of Herodotus, is a biographical romance, written probably in the second century A.D. The earliest recorded reference to Homer is that which occurred in a lost poem of Callinus, as reported by Pausanias (above, § 133). The earliest mention in extant work is by Xenophanes, who settled in Italy c. 530 B.C. The earliest quotation is by Simonides of Ceos (fr. 85, *Il.* 6. 148).

Notices of
Homer's life.

The term 'Homeridae' occurs first in Pindar, *Nem.* 2. 2, Ὀμηρίδαι ῥαπτῶν ἐπέων ἀοιδοί, referring to Homeric rhapsodists; where, however, the scholiast says that 'originally the name was given to descendants of Homer, who sang his poetry in hereditary succession.' The logographers Acusilaus (c. 500 B.C.) and Hellanicus (c. 440 B.C.) spoke of them as a clan in Chios named from Homer (Harpocration s.v. Ὀμηρίδαι): so also Strabo xiv. p. 645. They are mentioned by Plato as depositaries of the apocryphal poems (τῶν ἀποθέρων ἐπῶν) ascribed to Homer (*Phaedr.* 252 B), and as upholders of his fame (*Rep.* 599 E, *Ion* 530 D); by Isocrates (or. 10, § 65), as knowing esoteric traditions of his life.

Homeridae.

135. 'Homer' had been a subject of philosophical or rhetorical disquisition in Greece before any properly critical study of the poems began. Theagenes of Rhegium (circa 525 B.C.) is mentioned as the earliest of the allegorizing interpreters, who excused Homer's imputations on the conduct of his deities by explaining Hera as the air, Aphrodite as love, and so forth. Anaxagoras attempted a like process; the Homeric Zeus, he said, is mind, the Homeric Athena is art. These allegorizers are 'the old Homerists' (οἱ ἀρχαῖοι Ὀμηρικοί) of whom Aristotle says that 'they see small resemblances, but overlook large ones' (*Metaph.* 13. 6. 7). Rhetorical and sophistical ingenuity, such as that of Protagoras or of Hippias, also found ample material in the Homeric text. Again, there were students of Homer whose aim was to reduce his narrative to plain historical fact. Thucydides (i. 9—11) shows a leaning to a 'rationalizing' treatment of the Homeric narrative of the Trojan war.

Greek inter-
preters of
Homer.

136. But it was at Alexandria that Homer first became a subject of critical study. The great library contained texts (ἐκδόσεις) of Homer, which sometimes bore the name of the editor,

Alexandrian
criticism.

e.g. 'the text of Antimachus,'—(αἱ κατ' ἄνδρα); or the name of a city, as 'the text of Massalia' (αἱ κατὰ πόλεις). Besides these, there were 'common' or 'popular' texts (κοιναί, δημώδεις). All these were probably derived from an older vulgate text, of which the sources are unknown. This is a reasonable inference from the apparently narrow limits of textual divergence. The Alexandrian critics refer to various readings in particular verses, and to omissions or additions of a small kind, but do not indicate large discrepancies or dislocations. And those fragments of Homer which have recently been found in papyri of the third century B.C. (or of a somewhat later but still early date) contain nothing which invalidates this view.

The earlier Homeric criticism of Alexandria (from about 270 to 150 B.C.) is associated with the names of Zenodotus, Aristophanes, and Aristarchus.

Zenodotus of Ephesus, who became librarian of the Alexandrian Museum in the reign of Ptolemy Philadelphus (285—
 Zenodotus. 247 B.C.), published a recension of Homer, and a Homeric glossary ('Ομηρικαὶ γλῶσσαι). He appears to have been a gifted man, with a critical aim, but without an adequate critical method. Relying too much on his own instinct, he made arbitrary changes in the Homeric text; but he was a pioneer, and the effect of his work was, to some extent, lasting. Aristophanes of Byzantium (circa 195 B.C.), a pupil

Aristophanes. of Zenodotus, brought out a recension of Homer which seems to have been sounder than his master's, inasmuch as he had more respect for the evidence of manuscripts. His reading seems also to have been wider. A story characteristic of the two men has come down. Anacreon describes a fawn as forsaken *κεροέσσης ὑπὸ ματρός*. Zenodotus wrote *ἐροέσσης*, on the ground that only the males have horns. Aristophanes vindicated *κεροέσσης* by showing that poets (Pindar, Sophocles and Euripides) ascribe horns to hinds as well as to stags.

Aristarchus of Samothrace (a pupil of Aristophanes, and his successor in the headship of the Library) flourished c. 180—
 Aristarchus. 145 B.C. He published (1) *συγγράμματα*, treatises on special questions connected with Homer: (2) *ὑπομνήματα*, continuous commentaries on the Homeric text: and (3) *ἐκδόσεις*, editions of the text itself. Two such editions came from his hand; the second seems to have closed his labours on Homer. Previous grammarians had dealt chiefly with rare or archaic words (*γλῶσσαι*): Aristarchus studied also the Homeric usages of more familiar words. In forming his text, he gave due weight to manuscript evidence. He also commented on the mythology, the archaeology, and the topography of the poems. His recension was never adopted in its entirety as a standard text, but had much more influence than that of any other single authority. He was the best Homeric critic, and the greatest scholar of antiquity.

Almost all that is now known about the lost works of Aristarchus comes through Didymus, a laborious grammarian of Alexandria, who, *circa* 30 B.C., wrote a treatise on the Aristarchean text of Homer (*περὶ τῆς Ἀρισταρχείου διορθώσεως*). The work of Didymus is itself known only through the 'Epitome,'—a series of extracts from Didymus and three other writers on Homer (Aristonicus, Herodian and Nicanor), compiled *circa* A.D. 200—250 by some unknown hand. In the tenth century, a transcriber of the *Iliad* copied this Epitome into the margin of his manuscript. That ms. is the famous Codex Venetus A, now in the Library of St Mark at Venice.

The division of the *Iliad* and the *Odyssey* into 24 books each seems to have been firmly established at Alexandria as early as *circa* 250 B.C., but its origin is unknown. Writers of the fifth and fourth centuries B.C. indicate passages of Homer merely by mentioning the persons or events prominent in them: thus verses are cited as occurring *ἐν νεῶν καταλόγῳ* (*Il.* book 2), *ἐν Διομήδους ἀριστεία* (bk. 6), *ἐν λιταῖς* (bk. 9): *ἐν Ἀλκίνοῦ ἀπολόγῳ* (*Od.* 8. 521), *ἐν τοῖς νύκτροις* (*Od.* 19. 386 ff.).

The division into books.

137. The library founded at Pergamum in Mysia by Eumenes II, early in the second century B.C., became a rival to that at Alexandria; and a rivalry in Homeric criticism followed. Crates, of Mallus in Cilicia, who was librarian of Pergamum in the time of Aristarchus, wrote on Homer, and his emendations of the text are sometimes mentioned. In the view of Crates, Homeric criticism ought to include a mass of problems, philosophical, historical, and physical, which Homer suggested. The Pergamene school was rather inclined to despise the accurate grammarians of Alexandria; its own efforts were pretentious and sterile.

The Pergamene school.

138. The most important scholia on the *Iliad* are those in the tenth century Codex Venetus A, and come mainly from two sources, viz. (1) the Epitome already mentioned (§ 136), and (2) a body of commentary compiled later than the time of Porphyrius (*circa* A.D. 270), whose 'Homeric Problems' were used. The most valuable scholia on the *Odyssey* are those in the Codex Harleianus (13th cent.), no. 5674 in the British Museum.

Ancient commentaries.

Eustathius, archbishop of Thessalonica in the second half of the twelfth century, compiled *Παρεκβολαὶ εἰς τὴν Ὀμήρου Ἰλιάδα καὶ Ὀδυσσεΐαν*, i.e. 'Excerpts' bearing on Homer, which are taken from a very large number of writers, and illustrate both the language and the subject-matter.

139. The Alexandrians had decided that the *Iliad* and the *Odyssey* were the only authentic works of Homer. But their scrutiny into the authorship of the poems virtually stopped there. From a few casual mentions we learn that in the Alexandrian age there were, indeed, some persons who ascribed the *Iliad* alone to Homer, and the *Odyssey* to a different author. These were the

The Chorizontes.

'Separators' (οἱ χωρίζοντες). Aristarchus wrote against this 'paradox,' which never had any vogue in the ancient world.

140. A modern student of the *Iliad* and the *Odyssey* is at once struck with two broad facts about them. (1) Each shows finished poetic art. And Greek literature begins with these masterpieces. We have no samples of the ruder work which must have gone before. There is no parallel for such a phenomenon in the history of any other literature. (2) Each forms, in a large view, an organic and artistic whole. Yet each contains some parts which, on grounds of language or of matter or both, seem irreconcilable with the belief that one poet composed the entire epic. These two problems are the basis of 'the Homeric question.'

141. F. A. Wolf (born in 1759) published his *Prolegomena* at Halle in 1795. The critical study of the Homeric question began with that book. Wolf sought to prove four main points.

(1) The Homeric poems were composed, about the tenth century B.C., without the aid of writing, which then was either wholly unknown to the Greeks, or not yet in use for literary purposes. The poems were handed down by oral recitation only, and in that process suffered some changes. (2) The poems were for the first time written down about 550 B.C., in the time of Peisistratus. They then underwent some further changes at the hands of 'revisers' (διασκευασταί), or learned critics. (3) That artistic unity which belongs to the *Iliad* and (in a yet higher degree) to the *Odyssey* is not mainly due to the original poems, but has been superinduced by artificial treatment in a later age. (4) The original poems, out of which our *Iliad* and our *Odyssey* have been put together, were not all by the same author. But there was *one* poet, of commanding genius ('Homer'), who made 'the greater part' of the songs afterwards united in the two epics. This great poet not only 'began the weaving of the web,' but 'carried it down to a certain point.' The 'Homeridae,' who made the rest of the songs, 'were following the lines traced by him.'

Wolf, while stating his view with great power, had the tact to refrain from making it too precise; and its elasticity has been one source of its influence. The genuine developments of Wolf's theory have shown one of two tendencies.

One bent (represented by Lachmann) has been to make 'the first great poet' less influential than Wolf did; the other (represented by Hermann) has been to make him more so. Lachmann dissected the *Iliad* into 18 lays, and supposed that almost every one of them had originally been independent of all the rest. Köchly, performing a like process with a different result, found 16 such lays. Hermann, on the other hand, conceived that the great primitive poet ('Homer') had produced, in a series of short unwritten lays, the original sketch of each epic ('*Ur-Ilias*,' '*Ur-Odyssee*'), which later poets merely filled in or developed.

The 'Ho-
meric
question.'

Developments
of Wolf's
theory.

142. In contradistinction to the Wolfian view (held in common by Lachmann and Hermann), that Homer was a primitive author of short lays, G. W. Nitzsch (in works extending over the period from 1828 to 1862) set forth a radically different conception. He regarded 'Homer' as a poet who began a new epoch—by composing a large epic out of the short lays of an earlier period. This epic was the *Iliad*. The *Odyssey*, 'the work, perhaps, of the same poet,' was built up from similar materials. In both epics, some interpolations and changes were afterwards made by other hands; but each is the work, mainly, of one man.

Other theories.

Grote, accepting Nitzsch's fundamental proposition—that Homer was the founder of epopee as distinguished from the epos of short lays—conceived that our *Iliad* has grown, by later additions, out of a poem of more limited scope, an *Achilleid*, which originally consisted only of our books 1, 8, and 11 to 22 inclusive. Geddes, accepting Grote's general view, has argued that the additions to the *Achilleid* were made by the same poet (distinct from the original Homer) who composed the *Odyssey*.

W. Christ, in *Prolegomena* to his edition of the *Iliad* (1884), reverted to a view more like Hermann's (§ 141),—viz. that Homer composed a number of short lays, intended to be recited separately, but connected in his mind by an organic plan. He finds in the *Iliad* 40 such lays, which followed one another in the order of our text. This body of lays, the original *Iliad*, afterwards received some additions by other poets, and by rhapsodes.

143. The general result of Homeric study since the time of Grote has been to strengthen the belief that the original nucleus of our *Iliad* was a series of lays by a great poet who fixed the main incidents of the story, leaving room for others to expand and to complicate it. Books 1, 11, 16 and 22 probably contain the oldest parts of the epic. The legends of Achilles and Agamemnon were Achæan, belonging to Phthiotis in Thessaly, and the earliest lays about them were probably Thessalian; the prominence of Mount Olympus in the primary books of the *Iliad* is a significant trait. Such lays may have been further worked up by Aeolian bards in the colonies of Asia Minor. But the first poet of our *Iliad* was an Ionian, applying matured Ionian art to Aeolian material; and the continuers of his work were also Ionian poets, whom some critics associate with the Chian 'Ομηρίδαι. A well-nigh universal belief in ancient Hellas connected Homer with the western coast of Asia Minor, and especially with Chios. The Homeric dialect, as a whole, is Ionic, mainly of an early stamp, but not such as can have been spoken at any one time: it is composite, shaped by epic tradition, with an admixture of Aeolic forms. As to the age of the *Iliad*, the range of conjecture is still wide. A prevalent tendency of recent criticism has been to suppose that 'Homer,' the first poet, lived about 900—850 B.C., and that before 750 the *Iliad* had grown into something like its present form; though the

General results.—*Iliad*.

Doloneia (book 10), and several interpolated passages, are probably later. It is impossible to accept Fick's theory that the Homeric poems existed in a purely Aeolic dialect down to about 530—500 B.C., and were then translated into Ionic by the rhapsode Cynaethus of Rhodes.

With regard to the *Odyssey*, special mention is due to the view of Kirchhoff, which is briefly as follows. There was a very ancient epic on the *νόστος Ὀδυσσεύς*, answering roughly to our books 5, 6, 7 (greater part), 9, 11 (greater part), and 13 (to v. 184). A later poet composed a sequel to this epic, consisting of books 13 (from v. 185) to 23 (v. 296) inclusive, excepting book 15. The original 'Return of Odysseus,' with this sequel added, is Kirchhoff's 'older redaction' of the *Odyssey*—earlier than *circa* 800 B.C. About 660 B.C. a third poet added books 1—4 (the 'Telemachy'); books 8, 10, 12, 15, 23 (from v. 297), and 24. In doing this, he freely modified the 'older redaction.' Thus arose the 'later redaction,'—our *Odyssey*, save for some additions by later hands.

It is, at any rate, scarcely doubtful that the *Odyssey* was put together, nearly in its present form, by one man, who used earlier Ionian poems, and added to them. This may have been done in the seventh century; but the older parts of the epic can hardly be later than *c.* 800—750. Among the latest parts are the second *νέκυνια* (24. 1—204), and a passage in the first (11. 565—621). The references to Athens (7. 80 and 8. 321—325) are probably Attic interpolations of the sixth century.

All that could be attempted here was to mark some of the more salient points in the modern 'Homeric question.' For a fuller discussion of it, students must be referred to special treatises. Careful inquiry has done much towards defining the general limits within which a solution must be sought, and, as to those limits, there is now a large measure of general agreement. But there is less prospect of such agreement on the details of any precise theory; one reason of this being that the question necessarily leaves so large a scope to the individual literary sense. Continued study of the Homeric text itself, its contents, its language, and its style, is the only source from which further light can be hoped.

144. The heroic saga of Troy, which furnished the material to the Homeric poems, was also the source of several other epics, so planned as to form preludes or sequels to the story of the *Iliad* and of the *Odyssey*. The *Ἐπικὸς κύκλος* was a body of epic poems by various hands, arranged in the chronological order of the subjects, from the origin and warfare of the Titans, down to the slaying of Odysseus by his son Telegonus. When this Epic Cycle was first put together, is unknown. The earliest notice of it is by a grammarian named Proclus, whose date is uncertain, but may probably be placed about A.D. 140. He wrote a *Χρηστομάθεια γραμματική*, or 'Manual of Literature,' in which he gave prose summaries of the poems comprised in the Epic Cycle.

Extant fragments of the manual give his summaries of the poems in one part of the Epic Cycle,—viz. that which concerned the Trojan war. Arranged in the order of events, the series is as follows:—

1. *Κύπρια*: 11 books. Origin and earlier part of the Trojan war. Ascribed to Stasinus of Cyprus.
2. The Homeric *Iliad*.
3. *Αἰθιοπίς* (so called from the Aethiopian Memnon): 5 books. The Amazons at Troy. Exploits and death of Memnon. Death of Achilles. Contest for his arms.—Ascribed to Arctinus of Miletus.
4. *Ἰλιάς μικρά*: 4 books. From the contest for the arms of Achilles down to the capture of Troy.—Doubtfully ascribed to Lesches of Mytilene.
5. *Ἰλίου πέρις*: 2 books. Incidents attending the capture: story of Laocoon: withdrawal of Aeneas to Ida.—Ascribed to Arctinus of Miletus.
6. *Νόστοι*: 5 books. Adventures of heroes returning from Troy: Menelaus in Egypt: murder of Agamemnon.—Ascribed to Agias of Troezen.
7. The Homeric *Odyssey*.
8. *Τηλεγονία*: 2 books. The slaying of Odysseus in Ithaca by Telegonus, his son by Circe; and what ensued thereafter.—Ascribed to Eugammon of Cyrene (circa 565 B.C.).

Of the *Κύπρια* we have about 49 verses in all, preserved in quotations: the earliest citation is by Plato (*Euthyphr.* p. 12 A); but Herodotus (II. 117) mentions τὰ *Κύπρια ἔπη*, denying that the epic can be Homer's, since it contradicts a notice in *Il.* 6. 289 ff. Of the *Ἰλιάς μικρά* there remain 21 lines in all; one of these is preserved by Aristophanes (*Eg.* 1056 f.). Of the *Ἰλίου πέρις* we have but 12 lines in all, and of the *Νόστοι* only 3. Nothing remains of the *Αἰθιοπίς* or of the *Τηλεγονία*.

These Cyclic poems imply a knowledge of the Homeric epics, and help to fix a lower limit for their age. Stasinus, Arctinus, Agias and Lesches are obscure names, of uncertain date. But the *Cypria*, the *Aethiopsis* and the *Iliupersis* were probably as old as c. 775—700 B.C. The *Little Iliad* and the *Nosti* can scarcely have been later than 700—600 B.C.

145. The fame of Hesiod, as an ancient epic poet, dates at least from the early part of the seventh century B.C. From the literature of the fifth and fourth centuries B.C. we can see that he was then regarded as a great primitive teacher of practical and religious lore, not unworthy, on this ground, to be named along with Homer. The name Ἡσίοδος, like Ὀμηρος, became the symbol of a school, and was attached to compositions of diverse origin. But there is no reason to doubt that there was a poet named Hesiod, whose father emigrated from Cyme, a town of Aeolis in Asia Minor, to the village of Ascra, near Mount Helicon in Boeotia. The extant poems which bear Hesiod's name are, the *Works and Days*, the *Theogony*, and the *Shield of Heracles*. The first two of these are the poems with which Hesiod's name was chiefly associated throughout Hellas.

1. The *Ἔργα καὶ Ἡμέραι*, in its existing shape, consists of four parts. (i) Verses 1—382: a piece addressed to the poet's worthless younger brother Perses, exhorting him to work and to be just. (ii) 383—694, the *Ἔργα* proper, in two chief sections, viz. (a) precepts of husbandry, and (b) precepts of navigation. (iii) 695—764, a collection of ethical and religious precepts on various subjects;—marriage,—friendship and its duties,—ceremonial observances, to avoid the anger of the gods,—and actions which

should be shunned as ill-omened. (iv) 765—828. A calendar of lucky and unlucky days,—whence the second part of the title, 'Ἡμέραι.

It is impossible now to say with any exactness what the earliest form of this composition may have been. But the nucleus of it, the practical lore and the proverbial wisdom, must be as old as c. 750—700 B.C. It was always recognised by the ancients as Hesiod's undoubted and characteristic work.

2. The *Theogonia* is in three principal sections. (i) 1—115. An introduction, in which a hymn to the Muses (36—67) has been inserted. The author distinguishes himself from Hesiod (22 ff.). (ii) 116—962. *Theogony* proper: including (a) 1—452, Cosmogony: how the visible universe arose out of chaos. The eldest dynasty of gods, Oceanus, Cronus, etc. (b) 453—880. The struggle between the dynasty of Cronus and that of his son Zeus: defeat of the Titans, and victory of Zeus. (c) 881—962. The supremacy of Zeus; the Olympian gods and their offspring. (iii) 963—1022. Goddesses who have wedded mortals, and their children. The last four verses form a prelude to a *κατάλογος* of illustrious women, piecing it on, for purposes of recitation, to what precedes.

The *Theogony* is a compilation of temple-lore and popular tradition, which doubtless had the sanction of Delphi, and remained a standard authority on the genealogical facts. It may be as old as c. 700 B.C.: but, to judge by style and tone, of different authorship from *Works and Days*.

3. The 'Ἀσπίς Ἡρακλέους, a short epic of 480 verses, tells how Heracles (for whom Hephaestus made a shield) slew the robber Cycnus, son of Ares, at Pagasae in Thessaly. In its present shape, it commences with 56 verses concerning the birth and previous life of Heracles. This prelude begins with the words ἢ ὄλη, 'Or such as was...' the hero's mother Alcmena. It came, then, from the 'Ἡοῖαι—an enumeration of illustrious women which was ascribed to Hesiod, and was so called because each heroine was introduced by the words ἢ ὄλη. The *Shield of Heracles* is certainly of a later age than the *Works and Days* or the *Theogony*. But it may be as old as c. 600 B.C. (Heracles has shield and spear): the use of *Ϝ* is more careful than in most of the Hymns. Other short epics, also, were ascribed to Hesiod: either, perhaps, because their subjects (such as Dorian legends) lay outside of the Homeric myth-cycle, or because the treatment seemed Hesiodic, as dwelling on genealogy or on augural lore.

The distinctive note of Hesiodic poetry is the aim of imparting useful knowledge, whether technical (as in *Works and Days*) or historical (as in the genealogical poems). Further, it has a theological aspect: it stands in relation with the guardians and expounders of sacred lore at Delphi. This connexion is illustrated by the fact that a response of the oracle quoted by Herodotus (6. 86) contains a verse of Hesiod (*Op.* 285); and also by that trait of Hesiodic style which consists in substituting a descriptive epithet for the name of an object (e.g. φερόικος for 'snail,' *Op.* 571); a trait well-known in Delphic phraseology (Plut. *Mor.* 406 E). As seen in the *Works and Days*, Hesiod's style lacks the Homeric nobleness, and the Homeric rapidity. It is a homely style, of slow movement; the small groups of verses are like separate beads on a string. But there is an exquisite charm in the poet's feeling for the sights and sounds of country life, and for the signs of the changing seasons.

146. A collection of 34 pieces in hexameter verse has been handed down with the title, 'Hymns or Preludes of Homer and the Homeridae.' Rhapsodists usually prefaced an epic recitation by an address to some god; Pindar speaks of such

Stamp of
Hesiodic
poetry.

The Homeric
Hymns.

'Homeridae' as beginning *Διὸς ἐκ προοιμίου* (*N.* 2. 3). Most of these pieces were meant to serve as *προοίμια*, as is shown by the formula at the end, where the reciter says that now he will pass from the god to another theme. The hymn *εἰς Ἀπόλλωνα* is composed of two originally distinct poems, viz., one to the *Delian Apollo* (vv. 1—178), and one to the *Pythian Apollo* (179—546). The other hymns on a similar scale are those to *Hermes* (Hymn III), to *Aphrodite* (IV), and to *Demeter* (V). Each of these five longer hymns is a small epic poem (though each could be used as a *προοίμιον*),—narrating, with picturesque detail, some legend of the deity. There are many passages of great beauty, especially in the *Delian Apollo*, the *Demeter* and the *Aphrodite*. The Ionian epic style is fairly well maintained, and sometimes recalls the *Odyssey*; but the Homeric spirit and impetus are lacking. Much of the work may be referred, probably, to the sixth century B.C. (or the later part of the seventh). Didymus of Alexandria (c. 30 B.C.) thought that the hymn to the *Delian Apollo*, which Thucydides undoubtedly gave to Homer, was by the rhapsode Cynaethus of Rhodes (c. Ol. 69, 504 B.C., acc. to schol. Pind. *N.* 2. 1); but this is unlikely. It may be as old as the seventh century.

Next in interest to the five great hymns may be placed no. VII, on Dionysus taken by robbers (59 verses), and no. XIX, to Pan (49),—both, probably, Attic, of the fifth century. Some of the smaller pieces in the collection are mere scraps of inferior work. The short hymn to *Ares* (no. VIII) shows Orphic influences, as do also XIV (*Mother of the Gods*), XXX (*Earth*), XXXI (*Sun*), XXXII (*Moon*).

147. Epic verse continued to be written after the great age of Ionian epos was over. The Homeric model was followed by such men as Peisander of Rhodes, who (in the sixth century B.C. ?) wrote an epic on Heracles; by Panyasis, the uncle of Herodotus, who celebrated the same hero; by Choerilus of Samos, the historian's friend, who took the Persian invasion as the subject of the earliest historical epic on record; by Antimachus of Colophon, Plato's contemporary, who wrote a *Thebais*; and by many others. The Hesiodic tradition, too, was continued, in genealogical lore, by those dim figures of the seventh century, Carcinus of Naupactus, Asius of Samos, Eumelus of Corinth. Then there was a mystic epos, imbued with the Orphism of the sixth century. A philosophical epos, precluded by Xenophanes, is represented by Parmenides and Empedocles. (The Alexandrian and post-Alexandrian epics will claim a separate, though brief, mention.)

But, in tracing the development of Greek literature as a natural growth and as the expression of a national mind, it is correct to say that the epic period was closing when the lyric period began. The Greek epic, as a chapter in the evolution of Greek poetry, is represented by the age of creative activity in that kind. Its typical works are the Homeric poems.

B. ELEGIAC, IAMBIC, AND LYRIC POETRY.

148. The Ionians, who had created epos in its highest form, were also the leaders in developing the species of poetry which arose next after it. *ἔλεγος* (a word which has been conjecturally referred to an Armenian origin) was used from early times by the Asiatic Greeks to denote a dirge for the dead, accompanied by the flute. Phrygia, the home of early flute-music, seems to be the country from which the *elegos* came to the Ionians of the coast. But flute-music was not only funeral, and by the side of the funeral 'elegy,' festive or martial flute-songs arose, to which the name 'elegy' was extended. A new metre for such songs was invented by Ionian poets familiar with the epic hexameter. This was the 'elegiac' couplet (*ἑλεγείον*),—an hexameter followed by a pentameter. A continuous flow of hexameter verse sweeps the mind onward with it: in the elegiac couplet, the effect of the pentameter is to give a meditative pause, a moment of reflection,—inviting our thought to return upon itself. Epic poetry moved in an ideal region of heroic life. Elegiac poetry was an utterance of the new age which was beginning for Hellas, and especially for Ionia, in the eighth and seventh centuries,—an age of gradual transition from monarchy to democracy, an age of enterprise and discovery, of colonization and commerce, when fresh interests and widening experience stimulated individual thought and feeling.

Greek elegiac poetry was universal in its range of theme: it could give utterance to patriotic exhortation, to tender sentiment, to social gaiety, to the thoughts of the statesman or the philosopher, and to mourning for the dead. In *martial* elegy, we have a few verses from Callinus of Ephesus (660 B.C.), the first elegiac poet on record, who urges his countrymen to repel barbarian invaders; and the stirring 'exhortations' (*ὑποθήκαι*) of Tyrtaeus (c. 640) to the Spartans, in the time of the Second Messenian War. *Erotic* elegy has its earliest exponent in Mimnermus of Smyrna (c. 620 B.C.). *Gnomic* elegy is represented in the sixth century B.C. by Solon, with his thoughts on Attic politics and on life at large; by Phocylides of Miletus, with his moral precepts; and by Theognis of Megara (the only Dorian elegist of note) in those counsels, based on the maxims of Dorian aristocracy, which he addresses to his young friend Cyrnus. *Funereal* or *commemorative* elegy is illustrated, early in the seventh century, by Archilochus; in the next, by Sappho (fr. 119); and in the time of the Persian Wars, by Simonides of Ceos. In the fifth and fourth centuries B.C. elegiacs were occasionally written by many great masters of Attic verse or prose. No other form of Greek poetry lived so long. It was still cultivated with ingenuity and elegance in the reign of Justinian.

Elegiac
poetry.

Its range and
duration.

149. Iambic poetry, like Elegiac, was an Ionian creation, and first comes into view at the same period, viz., *circa* 700—650 B.C. The word *iambus* has been connected with the Greek *ιάπτω* ('to dart' or 'shoot'), as the metre of early satire: but another view makes it non-Hellenic and of Phrygian origin (H. Flach, *Gr. Lyrik*, p. 222). Elegiac and Iambic poetry may be regarded as, in a sense, companion forms, alike characteristic of the period which followed that of the great epos. Both alike were fitted for the utterance of individual thought and feeling on any subject; and neither demanded, of necessity, any high poetical gift. But there is also a difference between their aptitudes. The elegiac measure, derived from the epic, always suggests a circle of listeners: even when one person only is ostensibly addressed, the tone is social. The iambic measure, (the nearest, as the Greeks thought, to the cadence of every-day speech,) being more colloquial, is more suitable when the utterance is more personal, as in satire, or in controversy. Solon writes of his reforms both in elegiacs and in iambics: but the iambic form is that which he prefers for keen self-defence in detail. *Satire* was more especially the purpose to which iambic verse was applied by its earlier masters, as Archilochus (*c.* 650 B.C.), Semonides of Amorgos (*c.* 640), and Hipponax of Ephesus (*c.* 540), the inventor of the 'scazon.' This side of the iambic tradition was continued in Attic Comedy. The satirical vein was not, however, the only one in which these writers used iambic (and the kindred trochaic) metre. Solon's iambics, already mentioned, have an energy and a dignity which render them a worthy prelude to the iambic verse of Attic Tragedy.

Iambic poetry.

150. Elegiac poetry and iambic poetry were both, in their earliest days, lyric, *i.e.* were wholly or partly sung to music; but before the fifth century B.C. their connexion with music was relaxed or lost. Greeks of that century would have designated elegiacs or iambics as *ἔπη*. The lyric proper, inseparable from music, was called *μέλος*: a lyric poet was *μελοποιός*. (*λυρικός* occurs first in the second century B.C.) The rise of Greek melic poetry was necessarily preceded by some progress in music. (1) The Phrygian Olympus, *c.* 750—700 B.C., developed flute-music, *αὐλητική*. (2) Terpander of Lesbos, *c.* 710—670, improved the cithara. The story that he gave it seven strings instead of four is now rejected: it was already a heptachord; but he added a note at the top of the scale (*νήτη*), leaving out the third from the top (*τρίτη*), so as to obtain an octave with one note of the scale omitted. He developed the art of singing to the cithara, *κιθαρωδική*, and wrote *νόμοι* for it, sacred hymns to be sung by one voice.

Lyric poetry.

Greek melic poetry had two main branches, the Aeolian and the Dorian. The Aeolian was *monodic*, for one voice, and was essentially the utterance of the singer's own feelings. The Dorian was *choral*, and dealt largely, though not solely, with themes of public interest, especially with those suggested by acts of public worship.

Terpander established in Lesbos a school of *κιθαρωδοί*. The lyric poetry which grew from these beginnings took its colouring from the Lesbian temperament, in which Aeolian fire and passion were joined to a fine sense of grace and beauty in nature and in art.

The Aeolian lyric.

These qualities find unique expression in the fragments of Sappho (c. 610—565), which combine intensity of feeling with exquisite melody. She was the head of a school or group of pupils in Lesbos, maidens whom she trained in the lyric art, and much of her poetry seems to have been connected with events in their lives. A new fragment of five sapphic stanzas (much mutilated), addressed to her brother Charaxus, was found in Egypt in 1896. Her slightly older contemporary Alcaeus appears, in the little that survives of his work, as a brilliant Lesbian noble, tried by war and exile, cheered by love and revelry; a man of original force in language and metre, possibly the inventor both of the 'alcaic' and of the 'sapphic' stanza,—fitting measures for lyrics to be sung by one voice, in social gatherings. Sappho and (at an interval) Alcaeus are the great names of the Aeolian lyric: there is no third. In matter and form, Anacreon of Teos (c. 550—500 B.C.), the Ionian poet of pleasure, is akin to the Aeolians, but, instead of their passion, he has only a certain grace and sweetness. His metrical forms were largely of his own invention. The spurious *Anacreontea*,—some 60 short pieces, all in 'iambic dimeter catalectic' metre,—probably range in date from c. 200 B.C. to c. A.D. 400 or 500.

151. The Dorian choral lyric first took an artistic shape at Sparta.

The Dorian choral lyric.

Terpander had brought thither his citharodic art. A little later, Thaletas of Crete (c. 670—640 B.C.) had brought the *pæan*, the 'dance-song' (*ὑπόρχημα*), and the choral dances of the Cretan Apollo-cult. Alcman (c. 640—600 B.C.), who is said to have come to Sparta from Lydia, is the first recorded poet of the choral lyric. His best-known pieces were *parthenia* (odes for choruses of maidens): one fragment, found in 1855, contains about 100 verses. Among his other works were hymns, pæans, hyporchemes, and banquet-songs (*σκόλια*).

Stesichorus of Himera in Sicily (c. 640—555 B.C.) is the chief representative of the Dorian lyric in its earlier period. Heracles, Orestes, the Atreidae, Odysseus, Helen, and other persons of epos, were taken by him as subjects for hymns,—a form of poem previously reserved for gods or demigods. He was, in fact, a lyric interpreter of epic tradition; his dialect was epic, with a Dorian tinge. It was he who established the tripartite structure in *strophe*, *antistrophe* and *epode* as the norm for the choral lyric: but whether he was the first to add the epode is uncertain. Further, he broke new ground by his lyric treatment of love-stories in his poems entitled *Daphnis*, *Rhadina* and *Calyca*—precursors of the Greek novel.

Ibycus (c. 550 B.C.) passed the first part of his poetical career at his

native Rhegium in Italy, and wrote choral lyrics in the epic style of Stesichorus. He afterwards went to the court of Polycrates tyrant of Samos (533—522 B.C.), and there wrote love-poetry of an almost Aeolian fire. He is the only poet who has this kinship with both the great branches of the Greek lyric.

Simonides of Ceos (born in 556 B.C.), an Ionian, but of the Attic type, took the Dorian choral form for his lyrics. Others had sung of gods and heroes; he is the first who is known to have won the ear of Greece for *ἐπινίκια*, odes on victors in the national games. He also wrote lyric *ἐγκώμια* on notable men. His hyporchemes, too, were famed. Excelling in pathos, he made the dirge (*θρήνος*) an accepted form of lyric song. A lyric epitaph on the defenders of Thermopylae, and some lines on Danaë, show the finish and charm of his versatile art. His elegiacs have already been mentioned (§ 148). He died in or about 467 B.C., probably at Syracuse.

152. Pindar was born near Thebes in 518¹, and survived the year 446. His fragments represent almost every form of lyric poem,—Pindar.
(1) hymns to deities, (2) paeans to Apollo and Zeus, (3) dithyrambs to Dionysus, (4) *prosodia*, or processional songs, (5) *partheneia*, choral songs for maidens, (6) *hyporchemata*, choral dance-songs, (7) *encomia* in praise of eminent men, (8) *scolia* for banquets, and (9) dirges. Some of these fragments are magnificent. Parts of nine paeans have recently been discovered. But the forty-four odes of victory, *ἐπινίκια* or *ἐπινικοί*,—14 Olympians, 12 Pythians, 11 Nemeans, and 7 Isthmians,—are the poems by which moderns best know him, and they are also those which the old world held to be his masterpieces. The choral *ἐπινίκιον* was usually sung after the victor's return to his home, either in a procession (*Olymψ.* 14); or, as more often, at a banquet (*O.* 1); or at the doors of the victor's house (*Nem.* 1. 19); rarely at the scene of the victory (*O.* 8).

Like all Greek lyrics, Pindar's odes had an instrumental accompaniment,—that of the lyre (which he calls *λύρα* or *φόρμιγξ*, and once *κίθαρς*), or of the flute (*αὐλός*), or both combined. The general character and tone of the ode decided the choice of the musical 'mode' (*ἁρμονία*) in which it was to be set. (1) The *Dorian* mode was grave, strong, majestic; as Pindar himself says (fr. 67 Bergk⁴), *Δώριον μέλος σεμνότατον*. (2) The *Aeolian* mode was joyous, animated, festal, breathing the spirit of chivalry; hence it is associated with the *ἵππειος νόμος* (*Ol.* 1. 101) and with the *Καστόρειον* (*Pyth.* 2. 69). (3) The *Lydian* mode, suited to the *αὐλός*, was tender and plaintive; it was used especially in dirges.

These musical modes have their respective affinities with certain metrical rhythms. The rhythms chiefly used by Pindar are the following. (1) The *dactylo-epitrite*, based on the dactyl, — ∪ ∪, and the epitrite, — ∪ — —. This

¹ His birth, in the third year of an Olympiad (fr. 193), is placed by Suidas in *Ol.* 65 (520—517 B.C.). *Ol.* 65, 3 corresponds to 518 B.C., and this date is accepted by Christ, Wilamowitz, and Schröder. *Ol.* 64, 3, or 522 B.C., is, however, preferred by Boeckh and Gaspar.

grave and equable rhythm, sometimes called 'Dorian,' is naturally suited to the Dorian musical mode, with which it is associated in *Olymp.* 3. It is found in about one-half of the forty-four odes. (2) The *logaoedic* rhythm, based on the trochee, - ∪, and the light or 'cyclic' dactyl, ∪ ∪, in which the *morae* are not 2 + 1 + 1, but $1\frac{1}{2} + \frac{1}{2} + 1$. Having a brisk and airy movement, this rhythm is congenial to the Aeolian mode, with which it is joined in *Olymp.* 1, *Pyth.* 2, *Nem.* 3. The Lydian mode is thrice connected by Pindar with the logaoedic rhythm (*Olymp.* 5 and 14, *Nem.* 4), but only once with the dactylo-epitrite (*Nem.* 8). (3) The *paemonic* rhythm, based on the paeon, - ∪ ∪ ∪, and kindred cretic, - ∪ -. This occurs only in *Olymp.* 2 (the best example), *Olymp.* 10, and *Pyth.* 5.

Pindar's choice of mode and rhythm has, again, a certain influence on the colouring of his dialect. The basis of his dialect is that which Stesichorus adopted when he set the first example of treating heroic themes in lyric form. It is the epic, a composite dialect gradually shaped by poets, and not exactly corresponding with any spoken idiom. But Pindar tempers this with a certain infusion of non-epic Aeolisms and Dorisms, in proportions varying with the musical and metrical character of the poem.

Two general types of structure appear in the odes. (1) Thirty-seven of the forty-four are written in *triads*. The triad consists of strophe and antistrophe, with an epode. The number of triads in an ode ranges from one (as in *Olymp.* 4) to thirteen (*Pyth.* 4), but is usually three, four, or five; there is no ode of two triads. Some, at least, of the odes written in triads were accompanied by rhythmical dancing. (2) Seven of them are written, not in triads, but in a series of uniform strophes (*Olymp.* 14, *Pyth.* 6 and 12, *Nem.* 2, 4, and 9, *Isthm.* 7). These were processional.

As to arrangement of subject-matter, Pindar's normal scheme is (1) a proem, relating to the particular victory which he is celebrating, (2) a myth, which has some connexion with the victor's family or city, and (3) an epilogue, in which he returns to his immediate theme. But there is nothing mechanical in his method, which is of infinite flexibility and variety. His transitions are sometimes boldly abrupt, sometimes delicately skilful; e.g., in *Olymp.* 1 the relative τὸν (v. 25) is the link between proem and myth, as ἴνα (v. 95) between myth and epilogue. The first condition of understanding a Pindaric ode is to study it as a symmetrical whole.

Pindar's general characteristics are, splendour and swiftness of fancy and of language,—linking of present with heroic past by myths,—wise counsel, as of Delphi,—and panhellenic range of imagination. He had a matchless power of shaping magnificent phrases, and giving them their right setting in the spacious framework of the Dorian choral lyric. He has the keenest sense of what is grand or beautiful in nature. When he is epic (as in *Pyth.* 4), he brings out chosen moments with more than epic vividness, but curtails the story with more than epic boldness. His pictures of the heroes, so full of brilliant life, are in the spirit of Olympia, and of the generation which had repelled the Persians.

153. Bacchylides of Ceos (c. 507—430 B.C.?), nephew of Simonides, known till lately by a few fragments only, is now represented by nineteen poems or parts of poems, found in Bacchylides. Egypt in 1897: the date of the papyrus is probably c. 50 B.C. Of the thirteen epinikia in this collection, three (III—V) are for Hieron of Syracuse. The other six poems are hymns about divine or heroic persons, collectively called *διθύραμβοι* in the large Alexandrian sense. Two of these, both relating to Theseus, are of especial interest: viz. XVI [XVII], a paean for the Delian Apollo, to be sung by a Cean chorus; and XVII [XVIII], a unique example of a dithyramb in the form of a dialogue. Bacchylides was an elegant and facile poet, with a special gift for picturesque detail.

154. A yet more recent addition to the literature of the Greek lyric illustrates the last stage of its decline. Timotheus of Miletus (c. 447—357), musician rather than poet, was a popular composer of 'nomes,'—not grave hymns, like Terpander's nomes, but of a more florid and dithyrambic type. A papyrus found near Memphis in 1902 contains 253 verses, in free rhythms, from his nome called the *Persae*. Here we have 214 lines from the middle part of it (*ὀμφαλός*),—which describes the sea-fight at Salamis,—and the end (*σφραγίς*), in 39 lines, where he names himself. It is the oldest extant Greek MS. (c. 320—290 B.C.?).

C. DRAMA.

155. The origin of tragedy is discussed elsewhere (§ 424). The 'dithyramb,' first mentioned by Archilochus (c. 650 B.C.), was a festive song in honour of Dionysus. The name seems to be a compound of *δι-* (the root of *δῖος*, cp. *διόλεια*) with a modified form of *θρίαμβος* (*triumphus*), a word used by Cratinus (c. 448 B.C.), denoting some kind of hymn to the wine-god. Out of the 'dithyramb,' drama was developed by a gradual process, in which we can trace three principal stages.

Early
development.

(1) Arion of Lesbos (c. 600 B.C.) produced dithyrambs at Corinth which were sung by a chorus, probably of 50 persons. Further, the chorus of Arion was a *τραγικὸς χορός*. This meant 'a chorus of satyrs,' the attendants of Dionysus: Aeschylus uses *τράγος* in the sense of 'satyr' (fr. 207). The 'goat-chorus' may originally have been connected with an Arcadian cult of Pan; but from Arion's time, if not from a still earlier date, it was associated with Dionysus (cp. Herod. v. 67). The dithyrambic chorus, personating satyrs, became a principal feature of the Dionysia at Athens in the second half of the sixth century B.C. Satyrs, companions of the wandering god, might naturally sing of his adventures, and the leader of the chorus might take the part of Dionysus, or of some one related to him as worshipper or as foe.

(2) In Attica an early stage of its development is associated with the name of Thespis, a native of Icaria. At the Dionysia of 534 B.C. he produced a dithyrambic chorus of satyrs, but with an improvement. As leader of the chorus, he held a dialogue, not with the chorus, but with

a person appointed for that purpose, who was called the *answerer* (*ὑποκριτής*, afterwards the word for 'actor'). There was now a *dialogue*, there was narrative of action, and comment; but there could be as yet no *drama*. Here matters rested in the space between Thespis and Aeschylus. The foremost name of that interval is Phrynichus. One of his pieces was the *Capture of Miletus* (on the disaster of 494 B.C.): another, the *Phoenissae* (476 B.C.), on the Greek victories of 480—79. In the latter piece, the scene was at the Persian court: the chorus represented the wives of the king's Phoenician sailors. Phrynichus, as we know from Aristophanes, was famed for the simple sweetness of his lyrics,—'native wood-notes wild,' which he warbled as if the birds had taught him. To the same period belong Choerilus, an Athenian, and Pratinas, a Dorian who came to Athens from Phlius. Both made their mark in the development of the satyr-chorus, but little is known about them.

(3) Aeschylus, born in 525 B.C., is said to have first come forward as a poet about 500, and to have gained his first victory

Aeschylus.

at the Dionysia in 484. His development of the choral

τραγῳδία which he had received from Thespis and Phrynichus is thus described by Aristotle (*Poetics* iv. 13):—'Aeschylus first introduced a second actor; he diminished the importance of the Chorus, and assigned the leading part to the dialogue.' Aristotle had studied the history of Greek drama; writing at Athens *circa* 330 B.C., he had access to the whole literature, and to those records of the performances which he used in his lost *Διδασκαλία*. No fact in Greek literary history rests on firmer authority than his statement just quoted. Yet it has recently been alleged, without evidence, that the addition of the second actor cannot have been the work of Aeschylus, but must have been the official act of the State. The archon was paymaster; but the idea must have been the poet's. The general ordering of the Dionysia was, indeed, subject to the State. But in those early days, when the originally lyric *τραγῳδία* was being developed, each step in the development was due to the free initiative of the poetical artist. Arion took one step, at Corinth; at Athens, Thespis took a second step; Aeschylus took a third, the most important of all, and thereby created drama. Instead of the single actor, not a member of the chorus, with whom its leader held a dialogue, there were now two actors, both separate from the chorus. An actor might take more than one part. Thus in the *Suppliants*, for which Aeschylus used only two actors, there are three parts, Danaus, Pelasgus, and the Herald,—the first and the third being played by the same person. A story could now be told in action.

156. The words *τριλογία* and *τετραλογία* cannot be traced back beyond the Alexandrian age, but the things date at least from

Trilogy and
Tetralogy.

Aeschylus. A tragic poet, competing at the Dionysia,

produced a 'tetralogy,' or group of four plays, viz. three tragedies (a 'trilogy'), and a satyr-play. The number of the tragic chorus was at first 12: and the origin of 'tetralogy' is probably traceable to the

fact that four such choruses approximately represented the old dithyrambic chorus of 50. The collective tribute to Dionysus thus remained roughly the same, but gained variety and interest by being made in four separate parts, of which the last (the *σατυρικὸν δράμα* or *σάτυροι*),—a *παίζουσα τραγωδία*,—directly recalled the old *τραγικὸς χορός*. The 'tetralogy' was the regular form of tragic competition down at least to the close of the fifth century, and perhaps longer. The year 340 B.C. is the earliest for which a departure from the rule can be proved; in that year the competitors produced two tragedies each.

157. Among the seven extant plays of Aeschylus, the *Supplices* has the most marked affinity with the earlier time when the *τραγωδία* was essentially lyric. Its date is unknown, and has been placed as late as 461, or as early as 492: it must be older, at least, than 472; possibly of 491 or 490. The distinctive feature is the great importance of the Chorus, representing the fifty daughters of Danaus, who have fled to Argos to avoid marrying their cousins, the sons of Aegyptus. It was the first play of a trilogy; in the second (*Αἰγύπτιοι*, or *Θαλαμοποιοί*?) the victorious pursuers forced on the marriage, and in the third (*Δαναΐδες*) Hypermnestra was tried and acquitted for disobeying her father Danaus by sparing her husband.

The *Persae* (472 B.C.), also largely lyrical, seems to have been prompted by the *Phoenissae* of Phrynichus; it was the second piece of a trilogy which began with *Phineus* and ended with *Glaucus*; and it is the earliest play taken from contemporary history by a poet who had shared in the deeds which he celebrated. The *Seven against Thebes* (467 B.C.), that *δράμα Ἄρεως μεστόν* (Ar. *Ran.* 1022), breathes the soldier-spirit which appears in the poet's epitaph on himself at Gela (Athen. 627 c), but is not one of his best plays: it was the third piece of his Oedipus-trilogy, following a *Laius* and an *Oedipus*. The *Prometheus Bound* (probably later than 468) is an immortal masterpiece of creative imagination, moving, with Titanic power, amidst supernatural beings and elemental forces, yet presenting that vast and weird spectacle with unflinching obedience to the Hellenic instinct for clearness and for measure. It was followed by a *Προμηθεὺς Δυόμενος*: whether the *Πυρφόρος* was first piece or third, is doubtful.

In the *Oresteia* (458 B.C.), the only extant trilogy, each play is a whole, within a larger unity; the Erinys of the house prompts the murderess in the *Agamemnon*, menaces the avenger in the *Choephoroi*, and is reconciled with the spirit of mercy in the *Eumenides*. The character of Clytaemnestra,—the vision of Cassandra,—the presentment of the Furies in bodily shape, announcing and interpreting their own dread prerogatives,—these are among the things which best illustrate the sublime force of the poet's genius. The total number of plays written by Aeschylus is given by Suidas as 90, by others as about 70: the lower figure, so far as we can judge from ascertained titles, is nearer the mark. This would represent the work of

some 44 years, from *circa* 500 to 456 B.C., when he died in Sicily, at Gela. We have about 451 fragments.

Aeschylus uses iambic verse with equal mastery for vigorous narrative, as in describing the battle of Salamis; for declamation, as in the stately speech of Athena; for invective, as when Apollo expels the Furies; for controversy, as in the trial of Orestes; or for descriptive passages of quiet beauty, as when Prometheus depicts the change which he wrought on the primitive life of man. The poet's lyric style, again, is altogether his own; it has an epic tone, of Homeric nobleness; it is boldly imaginative, with an almost Pindaric rapidity in the succession of images; and it is reflective, not in Pindar's gnomic or didactic manner, but in a way that suggests a deeply-brooding mind, tinged with mysticism, grappling with dark problems of life and fate.

But his dominant thoughts, at any rate, stand out in grand, simple lines. He had seen *ὑβρις* overthrown in battle by the jealousy of the gods; he was an ardent lover of the freedom which he had helped to win; but it must be a freedom based on order, and secured against *ὑβρις*: his ideal is *τὸ μὴτ' ἀναρχὸν μῆτε δεσποτοῦμενον*. Sin will be expiated by suffering (*δράσαντι παθεῖν*): but Zeus has shown men the way to wisdom, and has ordained that by suffering men shall learn. Zeus, 'whoso'er he be,' is a power in harmony with reason, and working for righteousness.

158. The great founder of Attic drama was defeated at the Dionysia of Sophocles. 468 by a competitor some thirty years his junior, Sophocles of Colonus (born *c.* 496), who then gained the earliest of many victories. Ancient writers connect Sophocles with some improvements in the external form of tragedy. He added a third actor (Arist. *Poet.* iv. 15); and raised the number of the chorus from 12 to 15 (auct. vit., and Suidas). It was he, too, according to Aristotle, who first employed the art of the scene-painter (*σκηνογραφία*). We do not know how much this means. But one thing is evident. Aristotle names *σκηνογραφία* and 'the third actor' as the two inventions distinctive of Sophocles. Athenian tradition, then, which Aristotle had the amplest means of knowing, must have clearly associated Sophocles with some marked advance in the mode of producing plays.

More important, perhaps, than any matter of that kind was the change which Sophocles made in the method of tragic composition. The trilogy of Aeschylus consisted usually (if not invariably) of three tragedies connected in subject, so as to form three chapters of one story: and the satyr-play which completed the tetralogy had also (as a rule) some bearing on that theme. Sophocles introduced the practice of writing a trilogy in which the three tragedies had no link of subject with each other or with the satyr-drama which made up the tetralogy. This change suited the bent of his genius and the stamp of his art. The linked trilogy was a fitting instrument for Aeschylus, a dramatist of spacious imagination, who loved to express character by great strokes of action, and to trace the

gradual working of nemesis up to some goal of divine reconciliation. But the unconnected trilogy was more congenial to Sophocles. The moral interest is the central one in his plays. When the single tragedy has a final unity of its own, that more limited framework invites the spectator to concentrate his attention on the finer touches of ethical portraiture.

The *Antigone*, which may probably be referred to the year 442 or 441 B.C., is the earliest of the extant plays, as is indicated by some points of internal evidence; e.g. it is the only one of the seven which contains no instance of ἀντιλαβή (the division of an iambic verse between two speakers), or of an anapaest in the first place of the trimeter. This beautiful tragedy is typical of its author's method. A play of Sophocles always involves some central issue so contrived as to prove the characters of the chief agents to their depths. In the *Antigone*, that issue is the conflict between the heroine's resolve to obey the unwritten law of the gods, and the resolve of Creon to enforce his edict. The march of the drama is in unison with the strength and clearness of the central conception; every incident, every speech, contributes to the progress; at each step the tragic interest rises towards the climax. The *Antigone* well illustrates, too, the Sophoclean use of the Chorus, which with him is less active than with Aeschylus, yet always directly assists the development. It does so by attuning the thoughts of the spectators to successive moods in sympathy with the action. In the *Antigone* there are six choral odes, and each of them has a direct bearing on the dramatic moment at which it occurs.

The *Ajax*, though its date is uncertain, clearly comes next in age to the *Antigone*; the parodos is of the early type found in the Aeschylean *Suppliants*, *Persae*, and *Agamemnon*,—an anapaestic march followed by a lyric ode. Ajax dies at v. 865, and then more than a third of the play concerns the question whether he shall be buried. Athenians, familiar with the cult of Ajax, would find the true climax of the play, not in his death, but in the decision that he should receive funeral honours,—the necessary preliminary to his consecration as a ἦρως.

The *Oedipus Tyrannus*, of uncertain date (perhaps circa 429—420), has justly been regarded, from Aristotle onwards, as a model of excellence in the construction of a tragic plot; it contains, too, scenes of unsurpassed tragic power,—e.g. the abrupt exit of Iocasta, who sees the worst before it is seen by her lord. The *Trachiniae* (written probably between 420 and 410) has an imperishable charm in its Deianeira, one of the most exquisite portraits in all drama. Heracles, when he comes on in the last third of the piece, is less effective. The *Electra* may also be placed, on internal evidence, among the later plays (circa 420—414?). The avenging Orestes of Aeschylus and of Euripides is menaced by the Furies: the Sophoclean Orestes acts in calm reliance on Apollo, and there is no hint of trouble to come. The vengeance is regarded, as by

Athena in the *Odyssey*, in the light of a simply righteous deed; and in this sense the Sophoclean treatment of the story is characteristically Homeric.

In the *Philoctetes* (409 B.C.), a theme treated by the two other dramatists, the distinctive invention of Sophocles lay in associating the young Neoptolemus with Odysseus, and thus providing a new source of moral interest. No Greek play is superior to this in subtle character-drawing or in pathos. The *Oedipus at Colonus* was first brought out, after the poet's death, by his grandson and namesake, in the archonship of Micon (402—1), at the Dionysia in March, 401. It is a patriotic play, intensely Attic in feeling, with scarcely any plot, but of the highest interest and charm: the passing of Oedipus, at the sacred Colonus, is of a sublime beauty. A fourth actor is employed; this, and the choice of subject, are the only clear hints of date; but there is no doubt that the play was one of the poet's latest works. Aristophanes of Byzantium is said to have known 130 plays ascribed to Sophocles, and to have been allowed 113 as genuine. About 109 titles of lost plays are extant, and about 1012 fragments. A large part of a satyr-drama, the *Ichneutae*, has been recovered.

According to Plutarch (*Mor.* p. 79 B), Sophocles spoke of his own style as having passed through three successive phases. (1) In the first, he had imitated the majesty, the pomp,—*δῆκος*,—of Aeschylus. (2) The second was marked by *τὸ πικρὸν καὶ κατὰ τεχνον*,—‘incisiveness’ (the ‘sting’ of style, not ‘harshness’), and artificialism—an art which too little hid itself. (3) The third was *ἡθικώτατον λέξεως εἶδος*,—the kind of diction which is most expressive of character,—*καὶ βέλτιστον*, and therefore best for his purpose,—fittest to make the persons of drama seem real. (We do not know whence Plutarch got this: possibly it was from Ion of Chios.) Our earliest play, the *Antigone*, is 26 or 27 years later than the date at which Sophocles gained his first victory; and it is not surprising, then, if we find no clear trace of the first, or Aeschylean, phase. But in the *Antigone* there is more of visible and masterful art in language,—*τὸ κατὰ τεχνον*,—than (e.g.) in the *Philoctetes*, where we certainly find *τὸ ἡθικώτατον*. In his later years, Sophocles was influenced by Euripides in some details of language and versification. But, in all essentials, the style of Sophocles and the general character of his work remained, to the end, thoroughly distinctive, and totally unaffected by the younger poet, to whom, indeed, he everywhere presents a contrast. Thus the prologue of the *Trachiniae* is Euripidean only in so far as it is historical; it is totally unlike the typical prologue of Euripides in being dramatic.

Aeschylus was a great creator; Sophocles, pre-eminently a great artist. He took the legends, and presented them in a harmonious and beautiful form, suitable to the material, and intelligible to all men. Piety and sympathy conspired to interest him in character,—in the motives and feelings of men, and the effects on them of the discipline administered by the gods,—and he had seen that suffering might be a blessing. Sophocles

is essentially an Athenian of the age of Pericles. The impress of that age appears in his manner of reconciling consecrated tradition with newer and larger thoughts. He invests the conceptions of the popular religion with a higher spiritual and intellectual meaning. And the artistic side of the age is expressed by him in poetry, much as in architecture and sculpture it is interpreted by the remains of the Parthenon: there is the same sanity and wholeness of work; power joined to purity of taste; self-restraint; and a sure instinct of symmetry.

159. Euripides, born in 480 (16 years after Sophocles), began his career as a tragic poet in 455, and gained his first victory at the Dionysia in 441. Excluding the *Rhesus*, which is now generally allowed to be the work of some inferior hand (probably of the fourth century B.C.), we have 18 of his plays. Earliest among these is the *Alcestis* (438 B.C.), which stood as fourth play of a tetralogy in the place usually held by a satyr-drama (with which, in vv. 747—802, the revelling Heracles gives it a touch of kinship). To the same tetralogy belonged the lost *Telephus*, in which the poet broke with tragic convention by presenting that hero in the guise of a wandering beggar. The *Medea*, one of the greatest and perhaps the most faultless of its author's works, appeared in 431. The *Hippolytus* (428 B.C.?),—distinguished as *στεφανηφόρος* (in allusion to a wreath offered by the hero to Artemis) from an earlier form of the play which had offended Athenian feeling,—is notable for the psychology of Phaedra, and the skill which conciliates a certain sympathy for the sinning woman with pity for the innocent youth whom she brings to death. In the *Andromache* (probably earlier than 425 B.C.), Hector's widow, now the concubine of Neoptolemus, and her son Molossus, are rescued by Peleus from the malice of Hermione and Menelaus, while her lord is slain at Delphi through the intrigues of Orestes: a poor play, mechanically closed by the intervention of Thetis. The *Heracleidae* (also of the earlier period) is a patriotic piece: the sons of Heracles, persecuted by the Argive Eurystheus, are received and sheltered at Athens by Demophon, son of Theseus.

The *Hecuba* (earlier than 423 B.C.), in which the widowed queen of Priam wreaks her vengeance on the Thracian Polymestor, lacks unity of design, but has a cleverly woven plot. The *Suppliants* (421 or 420) is, like the *Heracleidae*, patriotic, and commendatory of an Athenian alliance with Argos. Creon king of Thebes has refused burial to the Argive warriors slain there. Their widows come as 'suppliants' to Eleusis. Theseus demands funeral rites from Creon, who is obdurate; the Athenians vanquish the Thebans in fight, and the Argive dead are brought to rest in Attic earth. Like the last two dramas, the *Mad Heracles* (circa 420—416) tends to exalt Athens,—the home to which Theseus brings the afflicted hero, to seek pardon from the gods for the deeds done in his Hera-sent frenzy. In the *Ion* (not later than 412), picturesque beauty and ingenious plot are combined with a severe treatment of Apollo. Ion, the young temple-

servant at Delphi, proves to be the god's son by Creusa—the child whom he had left to perish. Athena decrees that Ion shall be king of Athens, and progenitor of the four Attic tribes. The *Troades* (415) depicts the sufferings of Trojan dames, Hecuba, Andromache, Cassandra, after the fall of Troy. It is scarcely a drama, but rather a series of pathetic scenes.

The *Electra* (413) is a notably original work, unsuccessful as a tragedy, but deeply interesting as a characteristic treatment of a theme handled by both the elder masters; here, too, the criticism of Apollo is unsparring. The *Helena* (412) is based on the legend that the real Helen went to Egypt, and only her wraith to Troy. Menelaus rescues her, by a ruse, from the Egyptian Theoclymenus, and brings her back to Greece. Some of the lyrics are fine; but the subject was ill-suited to tragedy, as the comic poets did not fail to see. The *Phoenissae* (c. 411—409) concerns the same subject as the *Seven against Thebes* (which is glanced at in vv. 751 f.),—the war of Polyneices, supported by the Argives, against his brother Eteocles. The 'Phoenician maidens' of the chorus are supposed to be on their way from Tyre to Delphi, and to have been detained at Thebes by the outbreak of the war. The play is not impressive as a whole, but there are brilliant passages and effective scenes. The *Orestes* (408) deals with a sequel to the slaying of Clytaemnestra and Aegisthus,—the madness of Orestes,—his peril, and Electra's, from the wrath of the Argive assembly,—their final deliverance,—and, at the close, the rescue of Helen by Apollo from the sword of Orestes. Despite much that is inartistic or even absurd, this play enjoyed great celebrity.

Iphigenia among the Tauri (brought out probably between 418 and 412) is excellent both in plot and in character-drawing. Goethe's *Iphigenie* is at least its equal in the latter quality, and has a more effective close; but the Greek poet was bound by the motive of the myth to end with the founding of the Artemis-cult at Brauron. The *Iphigenia at Aulis*, produced after 406, a beautiful play which the poet left unfinished, forms, in subject, a prelude to the other: Artemis rescues the maiden, the betrothed of Achilles, from the altar at Aulis, and carries her to the Tauric land. The genuine play ends at 1508; a spurious epilogue, of wretched workmanship, has been tacked on to it. The *Bacchae* (finished, though not acted, before the poet's death in 406) was written at the court of Archelaus, and designed for performance in Macedonia, to whose traditions of orgiastic worship the subject was congenial. In picturesque splendour the play has no Greek rival. It is unique in its sustained glow of Dionysiac enthusiasm, to which keen irony lends the force of contrast, and in its sense of natural beauty lit up by fancy.

The *Cyclops*, the only extant satyr-drama of Euripides, is founded on the *Odyssey* (book 9); though not a strong piece, it has the interest of showing that the *genre* which it represents was not farce, but *παίγωνα τραγῳδία*. Of 92 plays current under the name of Euripides, 75 (including

8 satyr-plays) were held genuine by the Alexandrians. We know about 50 titles of lost plays, and have about 1106 fragments.

The genius of Euripides was at discord with the form in which he worked. He received tragedy with its primary conditions fixed:—three actors; a chorus; and, for material, the heroic legends. Aeschylus and Sophocles had felt, each in his own way, that the treatment must be ideal; *i.e.* a certain nobleness (of that Homeric kind which Eumaeus shares with Achilles) must be preserved to the persons of the heroic saga. Euripides broke this convention (1) by often making his persons the exponents of modern subtleties, sometimes of his own thought; (2) by touches of 'sophistic,' and of the new rhetoric; (3) by realism in the treatment of the myth, *e.g.* by presenting Telephus in the guise of a wandering beggar. Taking the ideal tragedy as his norm, Aristophanes insists in the *Frogs*, and quite truly, that Euripides had robbed *that* tragedy of τὰ μέγιστα (v. 1494), *i.e.* of its idealism. On the other hand, Euripides brought in new elements of romance and melodrama, which have constituted one of his charms for later ages.

In his technical method three points claim notice. (i) His choral odes often have nothing to do with the action. The chorus of the two elder masters was an organic part of the drama; between their dialogue and their lyrics there was continuity of thought and tone. Such continuity ceased to be possible when the myth was treated in a more realistic and modern spirit. Euripides could not get rid of the chorus; he was right, then, from his own standpoint, in making it a free lyric adjunct, a source of variety. Further, he admitted in his later lyrics the more florid music which was coming into vogue; and he also introduced solos of that stamp (*μονοδίαι*) for actors. (ii) He made the *prologue* serve, like a play-bill, to tell who the persons were, and where the story began. Though sometimes inartistic, this was useful in days when fewer people were at home in the myths; especially when he took them into the by-paths of legend. (iii) He made a large use of the *θεὸς ἀπὸ μηχανῆς* to close the play. The device is sometimes effective (as in the *Hippolytus* and *Bacchae*), sometimes clumsy (as in the *Andromache* and *Orestes*).

Certain thoughts on religion, conduct, and society pervade his work. He resented the popular mythology which made gods immoral. He was not, however, a mere agnostic or a pure rationalist. He recognised supernatural forces. He recognised human instincts and emotions above, as well as below, reason. Welcoming moral nobleness wherever he found it, in ruler, in virgin-martyr, in peasant, or in slave, he was troubled by the drift towards wrong and folly which he saw in public and social life. Mental loneliness and unrest are felt in him. Shrinking from no problem, and striving to reach the core of every situation, he makes his persons throw out such sayings as ἡ γλῶσσ' ἄμωμοχ', ἡ δὲ φρήν ἀνώματος, or τί δ' αἰσχρόν, ἦν μὴ τοῖσι χρωμένοις δοκῆ; These were seized on as immoral. And his influence on the multitude in his own day was perhaps, on the

whole, not good; for he blurred those Hellenic ideals which were the common man's best without definitely replacing them. The charge of misogyny brought against him, the Greek poet who has treated women with most sympathy and insight, is a gauge of the extent to which he was popularly understood. But his human pathos has a universal appeal; he is, as Aristotle says (*Poet.* xiii. 6), *τραγικώτατος*, the most moving of poets. Though as a metrist he is inferior to both the elder masters, some of his lyrics are unsurpassed in splendour of fancy (e.g. *Bacch.* 135—169), and in dreamy charm (e.g. *Hippol.* 732—755). In language he is an exquisite artist who can veil his art. He was the idol of later antiquity; and is the favourite of countless modern readers who care less for the ideal drama of Aeschylus or of Sophocles.

160. After 400 B.C. tragedy declined: there were many tragic writers, but no new master arose. Already in the fourth century the work of Aeschylus, Sophocles, and Euripides was classical, and it was prescribed that some piece of theirs should always be acted at the Dionysia along with the new plays. Athens remained the metropolis of tragedy till about 300 B.C.; then Alexandria became so, and in the reign of Philadelphus (285—247 B.C.) could boast of its seven poets known as 'the tragic Pleiad.' In A.D. 217 the edict of Caracalla abolished theatrical performances at Alexandria.

161. Tragedy sprang from the dithyramb; Comedy from the songs at rustic festivals of vintage and harvest, where the reductive forces in nature, of which Dionysus was one type, were the objects of a rude symbolic worship. [*Arist. Poet.* iv. § 12 ἡ κωμῳδία... ἀπὸ τῶν τὰ φαλλικά (ἐξαρχόντων).] Thus Comedy, like Tragedy, had an original kinship with the Dionysiac cult; as, on the other hand, the earliest Tragedy, like the earliest Comedy, was largely an improvisation (*ἀντοσχεδιαστική*, *Arist. I.c.*). But there was also a vital difference. Tragedy sprang from a form of lyric poetry which was already artistic, and already a recognised part of Dionysiac ritual at public festivals. The germ of Comedy was a kind of mirth-making which had no similar pretensions. Starting with this advantage, Tragedy preceded Comedy by some 30 or 40 years in attaining its mature Attic shape.

Dorians, who had a turn for rough satire and broad drollery, were the earliest comic entertainers. Megarian 'comedy,' first associated with the name of Susarion (*circa* 580—562 B.C.), seems to have dealt in jests of an order which Attic wit soon learned to scorn. At Syracuse, in the first half of the fifth century, Epicharmus advanced from the crude farce to a riper comic drama, drawn sometimes from common life, and sometimes from mythology. It is not known whether he used a chorus. The prose *μῦμοι* of his Syracusan contemporary Sophron were scenes from everyday life, classed, according to the sex of the persons, as *ἀνδρείοι* and *γυναικίαι*.

At Athens the course of development is supposed to have been somewhat as follows. (1) After the institution of the 'Great' or 'City' Dionysia

(perhaps c. 475 B.C.), a merry procession called a *κῶμος* had become a feature of that festival. A troop of mummers marched into the sacred precinct, to the accompaniment of flute and pipe, and sang a song in the god's honour: after which, one of their number addressed the audience in a humorous speech, turning on topics of the day. This *comus* was at first voluntary and unofficial. (2) Somewhat later, but probably before 460, the *comus* began to be organised with aid from the State: there was now a *χορηγία* for Comedy. (3) Between c. 465 and 431 B.C. the form of Attic Comedy, as we know it, was evolved by a process of which the details are unknown. *κωμῳδία* is thus 'the song of the *κῶμος*,' and presumably a term of Attic mintage; though the Dorians, according to Aristotle, supported their claim to the invention by maintaining that it was 'the song of the *κῶμη*' (their equivalent for the Attic *δήμος*: Arist. *Poet.* iii. § 3). Tragedy furnished the general model of the development. Cratinus (c. 450) is said to have limited the number of comic actors to three, and that number suffices for every play of Aristophanes (allowance being made for the assignment of small parts to 'supernumeraries' who are not required to be absolutely mute). The number of the Chorus, however, which in Tragedy was 12, and afterwards 15, was in Comedy 24 (as may be verified by the list of birds in Ar. *Av.* 297 ff.). In the fifth century Comedy was the chief feature at the Lenaea (held in Gamelion, at the end of January or beginning of February), but was acted at the Great Dionysia also. The number of competing poets in the comic *ἀγών* was then three, but was raised in the fourth century to five. Each poet exhibited only one comedy.

162. First among his predecessors, Aristophanes names Magnes (*flor.* c. 460), who catered for the public with choruses of harp-players,—of birds,—of frogs,—of Lydians, and what not, but failed to keep their favour. Then came Cratinus (c. 450—422),—the real founder of the Old Comedy,—who lived to defeat the Aristophanic *Clouds* with his *Wine-flask* (*Πυρίνη*),—boldly inventive, impetuous as a torrent,—once the rage, and at last a poor unheeded dotard. Next Crates (c. 449—425),—who turned from aggressive satire to more elaborate character-drawing (*Poet.* v. 3),—distinguished by his 'dainty conceits' and delicate style; but he had only a wavering success. Pherecrates (c. 438—410) imitated the manner of Crates, but without wholly renouncing political satire. Eupolis (c. 429—411), the contemporary and rival of Aristophanes, united a singular elegance of fancy and diction with fierce and bitter satire, such as he levelled in his *Βάπτται* against Alcibiades, and in his *Μαρικᾶς* (Ar. *Nub.* 553) against Cleon. Cratinus, Eupolis and Aristophanes formed the representative Alexandrian triad for the Old Comedy. Among its minor poets may be named Phrynichus (c. 429—400), who preferred literary or imaginative themes (thus his *Μονότροπος*, or 'Solitary,' depicted a sort of Timon): and Plato comicus (c. 420—390), who was mainly a political satirist; his *Hyperbolus* was brought out in 415.

163. Aristophanes, born *c.* 448, began his career with three plays exhibited in the names of other persons. The *Banqueters* Aristophanes. (*Δαιταλείς*, 427) is a satire on the New Education, followed in 426 by the *Babylonians* (subject-allies of Athens whom Cleon sets to grind, like foreign slaves, in his mill). The *Acharnians* (425) is a plea for the peace-party. Undeterred by the angry men of Acharnae, Dicaeopolis makes peace with Sparta on his own account, and forthwith presents an enviable contrast to the warlike Lamachus. In the *Knights* (424),—the first piece which the author brought out in his own name,—Nicias and Demosthenes, faithful slaves of Demos, extricate their master from the clutches of his rascally Paphlagonian steward (Cleon); the onslaught on the demagogue shows the Old Comedy in its most reckless mood of unsparing satire. The *Clouds* (a revised form of a play first produced in 423) is an attack on the new spirit of intellectual inquiry and culture rather than on a school or class,—‘sophist’ being used in a sense which would comprehend (*e.g.*) Heracleitus and Anaxagoras no less than Protagoras and Prodicus,—and Socrates is taken as the type of the entire tendency.

The *Wasps* (422), Racine’s model in *Les Plaideurs*, is a satire on the average citizen’s delight in being paid to serve on the huge juries of the law-courts, and the mad hunger for victims which it bred in him. The *Peace* (421) resumes the purpose of the *Acharnians*. Trygaeus, a woe-begone Athenian, soars to heaven on a beetle, and finds the gods pounding the Greek states with the pestle and mortar of war. He frees the goddess Eirene from a well in which she is imprisoned, and marries one of her handmaids. In the *Birds* (414), two Athenians (‘Plausible’ and ‘Hopeful’) persuade the birds to build a city in the clouds, to which, having found wings, they migrate. The gods, cut off from earth by the new settlement, send envoys to treat for peace, and ‘Plausible’ marries Basileia (‘Royalty’) daughter of Zeus. The play is essentially a flight of free fancy, an escape from the troubles of earth. It is a triumph of imagination and of lyric melody.

The *Lysistrata*, brought out at the Lenaea of 411, shortly before the Revolution of the Four Hundred, is reticent on politics, but interprets the popular desire for peace. The women take the question into their own hands, occupy the acropolis, and force the men to capitulate. The *Thesmophoriazusae* appeared a little later, at the Great Dionysia of 411, when the oligarchic conspirators had established a terrorism, though they had not yet struck their blow. The play eschews politics. Euripides is tried and condemned by the women at their festival, the Thesmophoria. In the *Frogs* (405), produced soon after the death of Euripides and of Sophocles, Dionysus goes to Hades to bring back a poet: Aeschylus and Euripides contend in the shades for the tragic throne, and the god’s choice falls on Aeschylus. The play is of unique interest as a contemporary criticism of Attic Tragedy by a poet who thoroughly understood it, but was detached from it. In the

Ecclesiazusae (392) the women, disguised as men, make their way into the ecclesia, and decree a new constitution, disfranchising the other sex. The *Plutus* (388) shows how Asclepius restores eyesight to the blind god of wealth, who thereupon enriches the good and impoverishes the unjust. The Chorus has no lyrics, but merely takes part in the dialogue.

The *παράβασις* was a characteristic feature which the Old Comedy inherited from the *comus*. At some moment of pause in the action,—usually towards the middle of the play,—the Chorus turned round so as to face the spectators, and ‘came forward’ a little towards them (hence ‘*parabasis*’),—when the coryphaeus addressed the house in the poet’s name, setting forth his merits, his grievances, or his views on things in general. The *Acharnians*, *Knights*, and *Wasps* have the *parabasis* in its most complete and elaborate form. The *Lysistrata*, *Ecclesiazusae* and *Plutus* have no *parabasis*. The full vigour of the Old Comedy (of which the *parabasis* is a symbol) did not much outlive 420 B.C. In his political satire Aristophanes scarcely affects to portray the real men; he gives a few of their superficial traits; but, for the rest, his Cleon and his Socrates are almost as much types of tendencies as his personified **Ἄδικος Λόγος*. It was his bent of mind, indeed, to clothe the abstract with a concrete form; and this is a mental link between the rollicking satirist of the *Knights* and that poet of brilliant and delicate fancy who soars in the *Birds*.

164. Attic Comedy is traditionally divided into three periods. The *Old Comedy*, first matured by Cratinus, maintains its slashing censorship of civic life in the earlier plays of Aristophanes, but becomes less pungently political in the work of his middle time (414—405), betraying the pressure of circumstances which imposed caution and reticence. The *Middle Comedy* (to which the *Ecclesiazusae* is akin, and to which the *Plutus* distinctly belongs) covers the period from c. 400 to 336. Political and personal satire has well-nigh vanished. The comic poet deals with types of characters or callings, which furnish his titles (e.g. *ὁ Δύσκολος, ὁ Στρατιώτης*), criticises philosophy or literature, parodies serious poetry, or travesties the myths. Scurrility (*αἰσχρολογία*) has given place to innuendo (*ὑπόνοια*: Arist. *Eth.* iv. 8. 6). The representative names of this period are Antiphanes and Alexis. The *New Comedy* (vigorous from c. 336 to 250) is a mirror of ordinary life and every-day interests—chiefly of eating, drinking, and intrigue. The stock persons are those familiar to us from the Latin transcripts by Plautus and Terence. Menander (*flor.* 321—c. 291) was the greatest master in this kind. With an art at once powerful and delicate, he made his characters live. But his recently recovered plays have not enhanced his reputation. His *γνώμαι*, each forming an Iambic trimeter, are couched in a diction often hardly distinguishable from that of Euripides,—who was indeed, an inspiration to the New Comedy. Philemon, Diphilus, Apollodorus, Poseidippus, are other prominent names.

But the ‘Middle’ Comedy really shades into the ‘New’ by gradations which defy a hard-and-fast line. The distinction of ‘Middle’ from ‘New’

dates only from the age of Hadrian. The Alexandrians were content to distinguish between 'Old' and 'New.' And here, at least, a clear line can be drawn. The 'Old' political comedy ceased when the chorus (with its parabasis) dwindled and perished. In the second half of the fifth century we hear of several short-lived or futile laws against personal satire (*μη κωμωδεῖν ὄνομαστί*). But by the beginning of the fourth century the dead set made against the comic *χορηγία* by aggrieved persons (like the dithyramb-writer Cinesias, whom the comic poet Strattis called *χοροκτόνος*) had prevailed, and the chorus was doomed. The chorus once silenced, the old political Comedy was gone; and, though political satire was still occasionally heard, the 'New' Comedy, in the larger sense, had begun. The further changes between 400 and 250 B.C. were not organic, but merely reflected gradual alterations in the tastes and manners of Athens.

D. HISTORICAL PROSE.

165. The earliest traceable Greek prose, in the sixth century and the first half of the fifth, is that of chroniclers who put together the local records of cities; compilers of myths or genealogies; writers on the geography and traditions of countries outside of Hellas; and speculative thinkers, who sought briefly to set forth their views on the origin of the physical world. These earliest prose-writers were mainly Ionian; but our knowledge as to most of them is very scanty. Cadmus of Miletus (*c.* 550 B.C.?), said to have written a *κτίσις Μιλήτου*, is a wholly obscure name. Eugeon of Samos (*c.* 510?) wrote annals of his island (*ἄροι Σαμίων*). Charon (*flor. c.* 470) did a like work for his native Lampsacus (*ἄροι Λαμψακηνῶν*), besides writing on Greek and on Persian history (*Ἑλληνικά, Περσικά*), and on the origins of cities (*κτίσεις*). Xanthus, a Lydian (*flor. c.* 450), wrote on the history of that country (*Λυδιακά*). Pherecydes of Leros (*flor. c.* 450 B.C.), called an Athenian because Athens became his home, compiled a large work on mythology. Acusilaus (*flor. c.* 500), a native of Argos in Boeotia, wrote 'genealogies' in which he drew on the Hesiodic poems. Among the early Ionian thinkers who committed their views to written prose were Anaximander of Miletus (*c.* 611—547), his follower Anaximenes, and Heraclitus of Ephesus (*flor. c.* 500). In quasi-historical prose-writing before Herodotus, the two most prominent names are those of Hecataeus and Hellanicus. Hecataeus of Miletus (*c.* 550—478), who wrote a *Περίοδος γῆς*, long remained an authority on geography: he was also a compiler of genealogical and other legends. The Lesbian Hellanicus lived *c.* 482—397: he compiled (1) local myths, (2) works descriptive of countries, as *Περσικά, Ἀργολικά*, and (3) lists of victors in games, etc. Thucydides (I. 97) mentions his *Ἀττικὴ ξυγγραφή* (the earliest *Attis*), finding fault with its chronology.

In contradistinction to the *ἐποποιός*, or maker of verses, the writer of prose narratives was called *λογοποιός*, as Hecataeus is termed by Herodotus (II. 143), or *λογογράφος*, the name by which Thucydides (I. 21) describes the earlier chroniclers generally.

These writers, with all their varieties of subject and treatment, had, as regards form, one trait in common. They made no pretension to charm of style. With them, the business of the *ψιλὸς λόγος* was strictly practical,—to instruct. Hecataeus began his work on genealogies thus:—*Ἐκαταῖος Μιλήσιος ὧδε μυθεῖται· τάδε γράφω, ὡς μοι ἀληθῆα δοκέει εἶναι· οἱ γὰρ Ἑλλήνων λόγοι πολλοὶ τε καὶ γελοῖοι, ὡς ἐμοὶ φαίνονται, εἰσὶν* (*Demetrius De elocut.* § 12). Dionysius, in his general estimate of the 'logographers' (*De Thuc.* 5), notes also that they simply compiled, without sifting or criticising.

166. Herodotus of Halicarnassus (born *c.* 484 B.C.) fought to free his city from the tyranny of Lygdamis; fled to Samos, but returned after the tyrant's fall; then went forth on wide travels, including a visit to Egypt (between 449 and 445); found a welcome at Athens, where he became the friend of Sophocles, perhaps of Pericles; and finally made himself a new home in Magna Graecia with the Athenian colonists at Thurii (443). He was again at Athens after 432, if, as is generally assumed, *προπύλαια* in v. 77 are the Propylaea completed in 432. He alludes to the surprise of Plataea by the Thebans (VII. 233), and the expulsion of the Aeginetans by the Athenians (VI. 91), in 431: to the execution at Athens of the Spartan envoys bound for Persia (VII. 137), in 430: and to the devastation of Attica by the Lacedaemonians (IX. 73). It is certain, then, that the History was under his hands till about 429 or 428. He probably died *c.* 425, leaving book IX unfinished. The present division into books (perhaps older than the naming after the Muses) is a good one, showing insight into the structure, but is certainly not the author's own. When he wants to say that he will mention something further on in his work, he uses such phrases as *ἐν ἄλλῳ λόγῳ* (VI. 39), *ἐν τοῖσι ὀπίσθε λόγοισι* (v. 22): and it is in this general sense that we should understand *ἐν τῷ πρώτῳ τῶν λόγων* (v. 36), referring back to I. 92.

The History derives its unity from the idea of collision between East and West, between Asiatic and Greek, culminating in the Persian wars. The first six books are, as it were, prefatory, leading up to the last three, in which the work reaches its climax. Book I is the career of Cyrus, the founder of the Persian Empire. Book II, opening with the accession of Cambyses, describes Egypt; in book III, the new king conquers the Nile-land, dies, and is succeeded by Darius. Books IV and V give the Persian campaigns in Scythia and Thrace, with an account of those countries; the Persian expedition to Libya, with some notices of that region and its Greek colonists; and the Ionian revolt to 498. Book VI, after finishing the Ionian revolt, relates the Persian expedition against Greece of 492, and that of 490, repelled at Marathon. Then comes the crown of the work—

Herodotus.

the great narrative of τὰ Μηδικά in books VII, VIII, IX, from the invasion of Xerxes in 480 to the retreat of Mardonius, and the capture of Sestos by the Greeks, in the winter of 479/8. It is possible that these last three books were the first which Herodotus planned and finished, and that he afterwards wrought his other material into the form of a large and varied poem to the Μηδικά. However that may be, the History, in its present shape, has a true unity,—not marred by book II, the part most obviously suggestive of an independent origin.

The sources used by Herodotus were manifold and various;—such records (chiefly monuments and inscriptions) as were accessible in cities or in temples, especially at Delphi; oracles; popular oral tradition; particular facts learned from specially informed persons (*e.g.* III. 55, IV. 76, VIII. 65, IX. 16); Greek writers, whether poets or λογοποιοί (VI. 52, 55, 137, etc.). He went about inquiring (ιστορέων), and tried to make out what was the truth. When there are two versions of a story, he sometimes gives both, either with an indication of his preference (III. 9), or without it (III. 47). He is perfectly fair, without personal or national prejudice or malice: see, *e.g.*, his remarks on the charge of medism against the Argives (VII. 152). If in parts of the Μηδικά (*e.g.* the story about the Corinthians at Salamis) he has reflected the Athenian feelings of his day, that proves nothing against the man's own temper of mind, as seen in his whole work. The treatise ascribed to Plutarch, περὶ τῆς Ἡροδότου κακοηθείας—which includes (§ 12) the amazing charge that he was φιλοβαρβάρος—is aptly characterised by Stein:—‘These assaults by an inordinately vain patriotism—which had no conscience in regard to historical fact—prove in the most significant manner the uncorrupted and undaunted integrity of Herodotus.’ He never pretends to an accuracy or certainty which he knew to be unattainable. In Egypt he had to rely chiefly on priests and local guides, and this is his warning to his readers (II. 123):—‘The stories told by the Egyptians can be adopted by anyone to whom such things are credible. As for myself, my principle throughout the history is this,—that I record as I heard it what was told on each occasion.’ Such warnings occur elsewhere also. When he criticises, the test is usually subjective,—his own sense of probability or fitness (οἰκός). He is pious; he treats the temple-legends with respect, often, too, with caution and reticence. He hints that men can know nothing of τὰ θεία (II. 3): but he clearly believes that supernatural agencies are potent over mankind; indeed, he relies on them overmuch to explain what mortals do or suffer.

The painstaking good-faith of Herodotus—manifest on every page—is indisputable. But he was not, of course, a critical historian: in his materials, fact was mixed with myth and folk-lore in varying proportions, and he was not competent to sift them. In regard to credibility, his History cannot be judged as a whole: every separate statement must be tried on its own merits. Akin to the Ionian writers of his own or an earlier day in describing countries geographically and socially, he is novel

in the massive epic-like unity of his plan, in the dramatic life of his narrative, and also in the desire to amuse while he instructs, as seen in his admirably-told stories. He is the earliest artist in his kind, the Homer of European prose.

167. Thucydides, son of Olorus, an Athenian whose family was connected with that of Cimon, and derived wealth from gold-mines at Scaptesytle in Thrace, was born, according to one Thucydides. account, in 471 B.C.; but some think a date nearer to 460 more probable. He is said to have been the pupil of Anaxagoras and of the rhetor Antiphon; he was at any rate a disciple of the new intellectual movement, with its scepticism of tradition, its cultivation of a popular dialectic, and its study of rhetorical style. In the autumn of 424, when holding a military command on the coast of Thrace, he failed to save Amphipolis, and (probably to avoid a death-penalty) went into banishment. During twenty years of exile, he visited Peloponnesus, Sicily and Magna Graecia, and perhaps the court of Archelaus in Macedonia. In 404 he returned to Athens. He seems to have passed the last years of his life in Thrace. A conjecture regarding the date of his death has been founded on his silence in book III, ch. 116, as to an eruption of Etna which occurred in 396.

Throughout the Peloponnesian war, from its beginning in 431, he was collecting and sifting material for his work,—doubtless, too, gradually writing the first draft of it. But there is internal evidence that the History did not take its present shape until after 404. His plan was to carry it down to the capture of Athens in 404 (v. 26); but book VIII breaks off shortly after the Athenian victory at Cynossema (411). The *Bíos*, of composite authorship, which bears the name of Marcellinus (4th or 5th century A.D.?), says (§ 58), τὴν μὲν πραγματείαν αὐτοῦ οἱ μὲν κατέτεμον εἰς τρεῖς καὶ δέκα ἱστορίας, ἄλλοι δὲ ἄλλως, adding that ‘the current and received division’ (ἡ πλείστη καὶ ἡ κοινή) into eight books ‘has prevailed.’ If Thucydides had divided his work into eight books, the division into thirteen, and the ‘other’ arrangements here mentioned, could scarcely have found vogue. The division into eight books was presumably Alexandrian.

Book I opens with an outline of Greek history from the earliest times (1—23), designed to bring out the incomparable magnitude and significance of the war in which all Hellas (practically) was enlisted on the side of Athens or of Sparta. Despite the inevitable attempt to rationalise myth into history, this *ἀρχαιολογία* shows an insight and a grasp unmatched in the writings of the age. A survey of the πεντηκονταετία (479—431) fills book 1. 89—117. The ‘Archidamian’ or ten-years’ war (431—421) is concluded in books 11—v. 24. The rest of book v (25—116) opens the story of the years of nominal peace (421—413), carrying it from the spring of 421 to the autumn of 416. The formula in c. 26 marks the author’s sense that this is a distinct chapter of the war (γέγραφε δὲ καὶ ταῦτα ὁ αὐτὸς Θεοκυδίδης), and announces that the history will go down to ‘the capture of the Long Walls and the Peiraeus’ (in 404). Events in

Greece Proper between the autumn of 416 and the autumn of 413 are incidentally noticed from time to time in books VI and VII. Had the author lived to finish his work, these notices would perhaps have been incorporated, with additions, at the end of book V, which is incomplete. The narrative of the Sicilian expedition in VI and VII, which has a unity of its own, may have been written before V; thus it is noticeable that Alcibiades, who figures largely in V, is introduced in VI. 15 as if mentioned for the first time. Book VIII contains the events of about two years (Nov. 413—Sept. 411),—the beginning of the *Δεκελεικὸς πόλεμος* or 'Ionian' war (413—404). It ends abruptly in the middle of chapter 109. The unrevised state of book VIII may be inferred from various small defects of style, but is less conspicuous than it has sometimes been represented. The absence of speeches in VIII cannot safely be regarded as a proof of incompleteness.

In contrast with *λογογράφοι* who compiled uncritically and wrote for effect, Thucydides claims that his history rests (*a*) on his own knowledge as an eyewitness and hearer, and (*b*) on laborious and accurate research. His ruling principle has been strict adherence to carefully verified facts (I. 21). We have only his results; but the lucid, judicial, severely earnest mind which is seen in the History makes it easy to accept his own account of his method. His use of official documents is noteworthy. In nine instances he gives the text of a treaty. Two of these affect Peloponnesian States only, and belong to the year 418 (V. 77, 79): to these he may have had access, as an exile, through Sparta or Argos. One (V. 47) is a treaty between Athens and the Argive confederacy, which he may have seen at Athens after his return in 404. Three are agreements between Sparta and Persia in 412 (VIII. 18, 37, 58), which neither power would have cared to publish; how he obtained these, it is hard to say, unless (as has been suggested) Alcibiades was the channel. The remaining three, agreements between Athens and Sparta, are of the years 423 (IV. 118) and 421 (V. 18, 23). These last three, it is assumed, he must have consulted at Athens after his return in 404: though it is not evident why he should not have seen them at Sparta. On the ground of some apparent discrepancies of a small kind between these three documents and his narrative, it has been supposed that the latter was composed first, and that the documents were inserted in a revision made by him after 404. The important point is that he desired to incorporate the evidence of the documents themselves. That marks an approach to the idea of critical history which places a wide interval between him and his predecessors.

With regard to the speeches, which constitute between a fourth and a fifth part of the History, he tells us (1) that he never introduces such a speech except when he had reason to know that one had been made; (2) that he does not pretend to give the exact form; but (3) that he has faithfully reproduced the speaker's general line of argument, the purport

and substance of his speech, whenever it could be ascertained. With Thucydides, a speech or debate reported in the direct form always signals a noteworthy point in the inner or mental history of the war, as distinguished from the narrative of its external facts. It brings into relief those thoughts and arguments which the writer wishes to make distinct and vivid in their bearing on some political or strategic moment. The style of Thucydides, most elaborate in the speeches, reflects the rhetoric of the day in its verbal artifices, such as antithesis and the discrimination of synonyms: so far it resembles the style of Antiphon. But it expresses Thucydides himself in its most characteristic features,—the eager crowding of thought on thought within one distended sentence, and the indifference to strict grammar so long as the idea is forcibly brought out. A theory has been put forward that the present complexion of the text is due to wholesale interpolation in late times, and that the real Thucydides was far more lucid, almost a Greek Macaulay. This view demands a violent and unscientific handling of the text; nor has it any support from external testimony. There has been, no doubt, some interpolation, but not in this sense or to this extent. A papyrus of the first century A.D. lately found in Egypt contains Thuc. iv. 36—41; and the text is substantially the same as that of our mss., varying from it only in small details.

The genius of Thucydides is seen especially in the vivid power with which he interprets the tempers, motives, and policies of states and leading men. It is characteristic of him (in contrast, *e.g.*, with Herodotus) that supernatural agency finds no place in his work: the causes with which he deals are rational and moral. Joining experience of war to grasp of principles, he illustrates the military art on land and sea. Intellectually and politically he is the greatest historian of the ancient world.

168. Xenophon, born about 431 B.C., of a good Athenian family, came as a young man under the influence of Socrates. In the spring of 401 he went to Sardis, on the advice of his Boeotian friend Proxenus, and there joined an expedition, including upwards of 10,000 Greek mercenaries, which the young Persian prince Cyrus was about to lead inland,—nominally to Cilicia, but really into Persia, for the purpose of overthrowing his elder brother, Artaxerxes II. In a battle fought at Cunaxa, about 50 miles from Babylon, Cyrus was killed (September, 401). Soon afterwards the Greek leaders were treacherously seized by the satrap Tissaphernes, at a parley to which he had invited them, and put to death. The Greek troops, left leaderless, were in dismay, when Xenophon (hitherto neither officer nor private soldier, but merely an unattached volunteer) put heart into them by a spirited speech, and caused new generals to be chosen, of whom he himself was one. Fighting their way along the Tigris northward, past the site of Nineveh, and then through the mountains of the Carduchi (Kurds), in the fifth month (early in 400) they heard their vanguard cry, '*the sea, the sea!*' From Trapezus (Trebizond) on the Euxine, they made their way to

Xenophon.

Byzantium. After two months' service with the Thracian chief Seuthes, the remnant of the Ten Thousand was incorporated at Pergamum with the army of the Spartan harmost Thibron. There, in March 399, Xenophon left them. If he then visited Athens, it was probably before the death of Socrates in May. Later in 399 he was again on the coasts of Asia Minor. In 396 he took service in Asia Minor with Agesilaus, and was present at Coronea (394), when his favourite hero defeated the allied Athenians and Thebans. Not long afterwards he was sentenced at Athens to banishment and confiscation of goods, as the penalty of 'Laconism.' The Spartans gave him an estate at Scillus in Elis, about two miles from Olympia, where, for many years (*circa* 387—371), he passed his life in country pursuits (especially hunting), and writing. This was his great literary period. Soon after the Spartan defeat at Leuctra (371), he was driven from Scillus, and settled at Corinth. After the new alliance between Athens and Sparta in 369, the Athenian sentence on Xenophon as a 'laconizer' was rescinded. His two sons then went to Athens, and served in the Athenian cavalry at Mantinea (362), where one of them (Gryllus) was killed. Xenophon's literary labours were continued at Corinth, and partly, perhaps, at Athens. He probably survived the year 355.

The writings of Xenophon may be classed as I. historical and political; II. ethical or philosophical; and III. technical.

I. The *Hellenica*, in seven books, takes up the history of Greece at the point in 411 where Thucydides breaks off, and continues it down to the battle of Mantinea in 362. The first part of the work (1—II. iii. § 10) completes the design of Thucydides by carrying the narrative of the war down to the capture of Athens in 404. This part has certain traits which mark it off from the rest of the *Hellenica*, viz. (1) the Thucydidean arrangement of events by years, (2) the absence of reference to sacrifices before and after battle, (3) the abstinence from criticisms of a personal kind, (4) the annual summary of Sicilian affairs. Dionysius (*Ep. ad Cn. Pomp.* iv), and Marcellinus (*Vit. Thuc.* § 45) speak of Xenophon's supplement to Thucydides as a distinct work, to which he pieced on his 'Ἑλληνικὴ ἱστορία. The part of Book II which begins at iii. § 11 forms a connecting link. The rest of the *Hellenica* falls into two chief portions, the first ending with the Peace of Antalcidas (v. i). The supplement to Thucydides was doubtless written first; the two subsequent portions were probably separated both from it and from each other by an interval; Xenophon was still working on the latter portion in 358. The History is full of instructive and picturesque detail. It has not, however, the higher unity either of art or of systematic thought. We miss the political insight and the intellectual grasp of Thucydides. The chronology, too, is often obscure. But the most serious defects appear referable to the writer's prejudices (especially in favour of Sparta, and, above all, of Agesilaus). Thus the Theban revolution of 379 is narrated without a mention of Pelopidas (v. v).

Neither he nor Epameinondas is named in connexion with the battle of Leuctra (v. iv. § 3). The foundation of Megalopolis passes unnoticed (vi. v).

The *Anabasis* comes chronologically between *Hellenica* II and III, and accordingly in III. i Xenophon refers us, for that expedition, to the account 'written by Themistogenes of Syracuse.' This account is no other than his own *Anabasis*, which was first published, it is clear, under the name of the Syracusan. His motive may have been to avoid the appearance of self-praise. In the *Anabasis* Xenophon is at his best; he tells his thrilling story with that freshness which a man of action often commands where a literary artist might fail; the style is plain, fairly concise, never rising much, but full of lively detail. It is a memorable book; that march opened the eyes of Greece to the inner weakness of Persia, and prepared the way for Alexander's invasion. The *Agésilais*, a panegyric on the Spartan king, is largely put together from the *Hellenica* (books III and IV), and has been suspected as spurious, but without convincing reason. The essay on the *Lacedaemonian Polity* commends the institutions ascribed to Lycurgus, while admitting (c. xiv) that in modern Sparta they have broken down. The *Περὶ πόρων*, suggesting means for enlarging the revenues of Athens, is probably genuine. As appears from c. v. § 12, it was not written before 355.

II. The *Ἀπομνημονεύματα* (*Memorabilia*), recollections of Socrates, exhibit him chiefly in the aspect which impressed the writer's practical mind, as one who did moral and mental good to his associates. All the principal features of the master's thought and method are brought out. Xenophon, a Boswell, is probably truer to the life than Plato. The *Apology of Socrates*, seemingly meant to supplement or correct Plato's piece of the same name, is, if genuine, scarcely worthy of Xenophon. In the interesting *Oeconomicus*, Socrates exchanges views with a typical Athenian *καλὸς κἀγαθός* as to the management of his household and land. In the *Symposium*, a suggestive picture of an Athenian supper-party, Socrates discourses on the higher and lower *ἔρως*. There are parallelisms with Plato's dialogue, but the question of priority is doubtful. The *Cyropaedia* describes the education and life of the elder Cyrus, regarded as an ideal ruler; it is Socratic in tone, and highly finished in style, with a romantic colouring (as in the episode of Abradates and Pantheia, the first love-story in European prose). The *Hieron* is a dialogue in which Hieron, tyrant of Syracuse, dwells on the advantages of a private station, and the poet Simonides on the possible beneficence of a *τύραννος*.

III. The treatises on *Horsemanship* (*Περὶ ἵππικῆς*), the *Cavalry Officer* (*Ἱππαρχικός*), and *Hunting* (*Κυνηγητικός*) are practical manuals rich in the interest of technical detail. But the *Hunting* cannot, in its present form at least, be Xenophon's. The style in some parts (as in I. 1—17) is not his.

In the wide range of subjects covered by Xenophon he appears as an Athenian of practical bent and shrewd common-sense, familiar with many phases of non-Attic Hellas, a man who had seen and done much; a writer without rhetorical ambition, but too genuinely simple to affect simplicity; not wholly free from narrow prejudices, but of honest and pure aims, and with a plain Attic charm of his own.

169. The short and mutilated *Ἀθηναίων Πολιτεία*, in three chapters, wrongly ascribed to Xenophon, is by an unknown author, who wrote *circ.* 424—420 B.C. It is thus the oldest extant piece of literary Attic prose; in style not rhetorical, but colloquial, terse and pointed. The writer (who has been dubbed 'the old oligarch') dislikes democracy, but does not see his way to a change, and argues, with much candour and lucidity, that the Athenians, having adopted democracy, take the right means to maintain it,—*e.g.* by making the subject-allies bring their lawsuits to Athens.

The *Ἀθηναίων Πολιτεία* found in Egypt in 1890, and first published in 1891, has a preponderance of evidence in favour of its Aristotelian origin, whether its present shape is due to Aristotle or to an editor. It contains (I) a sketch of Athenian constitutional history to the restoration of the democracy in 403 (cc. 1—41), and (II) a description of the constitution existing in 328—325 B.C., under the heads of (1) franchise, (2) legislature, (3) administration, and (4) judicature (cc. 42—63). The first part raises several problems, where it differs from other authorities; the entire trustworthiness of the second part is unquestionable; and the historical interest of the whole can hardly be overrated.

170. The earlier Greek historians had been travellers, soldiers, men of affairs; in the second half of the fourth century we hear of bulky histories compiled by purely literary men, whose forte was rhetoric. Ephorus, a pupil of Isocrates, wrote a history of Greece (from the 'Return of the Heracleidae' to 340 B.C.), which was valued by Polybius, and was freely used by Diodorus Siculus. Theopompus (also an Isocratean) wrote *Hellenica* in twelve books, dealing with the years 411—394; and a colossal *Philippica* (with Philip of Macedon for its central figure) in fifty-eight books, covering the period from 362 (where Xenophon leaves off) to 336. The period covered by his *Hellenica* was also chosen by another continuator of Thucydides, Cratippus; and a recently discovered narrative of the events of 396—5 has been variously assigned to Cratippus or Theopompus, or Ephorus. With these writers may be ranked Timaeus of Tauromenium, who carried the history of Sicily to the year 264 B.C. In contrast with works of this ambitious scope, special treatises on Attic history and archaeology (*Atthides*) employed a series of writers from Cleitodemus or Cleidemus (*circ.* 360 B.C.) onwards. The *Atthis* of Philochorus, which carried the history to 262/1 B.C., is the most important of which fragments remain.

Treatises on
the Polity of
Athens.

Literary
compilers of
history.

E. RHETORIC AND ORATORY.

171. The earliest Greek writer on the art of rhetoric was Corax of Syracuse (c. 466 B.C.), whose Τέχνη λόγων was primarily meant to help the plain citizen in speaking before a law-
The early
Rhetoric.
 court. He divided a speech into five parts,—proem, narrative, arguments (ἀγῶνες), subsidiary remarks (παρέκβασις), and peroration. He also illustrated the topic of general probability (εἰκός), showing its two-edged use: e.g. if A, a puny man, is charged with assaulting B, an athlete, he can say, ‘Is it likely?’ If B is charged with assaulting A, he can say, ‘Is it probable that I should have done so, when my superior strength was sure to create a presumption against me?’ This topic of εἰκός (says Aristotle, *Rhet.* 2. 24. 11) was the staple of the *Art* of Corax. It was further developed in the τέχνη of his disciple Tisias (cp. Plat. *Phaedr.* 267A), who led a wandering life, and is said to have taught Lysias at Thurii and the young Isocrates at Athens. Gorgias of Leontini, when he visited Athens in 427 as an envoy from his fellow-citizens, captivated the Athenians by his oratory, which had a poetical character, and was especially marked by florid antithesis. It is doubtful whether he wrote an ‘Art’: diction (λέξις), not invention or arrangement, was his chief study. While the Sicilian school thus developed the technicalities or graces of rhetoric, the Sophists of Greece Proper dwelt especially on the minute proprieties of language; as Prodicus on the discrimination of synonyms (ὀρθότης ὀνομάτων, Plat. *Euthyd.* 277E), and Protagoras on correct grammatical forms (ὀρθοπέεια, id. *Phaedr.* 267C).

172. Antiphon, the earliest of the ten Attic orators in the Alexandrian canon, was born c. 480 B.C., and put to death in 411 by the
Antiphon.
 restored democracy, on account of the part which he had taken in organizing the oligarchy of the Four Hundred. His work as a theorist and teacher of rhetoric is represented by three Τετραλογίαι, each consisting of four skeleton-speeches in an imaginary trial for homicide (α and γ by the accuser, β and δ by the defendant). Of his three extant speeches in real causes, the most important is a defence for a man charged with the murder of an Athenian, Herodes, in Lesbos (περὶ τοῦ Ἡρώδου φόνου, c. 421—417 B.C.): another, a defence of a choregus on a charge of homicide, arising from the death of a youth in training for a chorus (περὶ τοῦ χορευτοῦ): the third, a speech in which a young man charges his stepmother with poisoning his father (κατηγορία φαρμακείας). Antiphon is the earliest professional writer of forensic speeches (λογογράφος). He represents the ‘austere’ or ‘rugged’ style of early prose (αἰσθητὰ ἁρμονία), as distinguished from the ‘smooth’ (γλαφυρά) of Isocrates, and the ‘middle’ (μέση) of Demosthenes (Dionys. *De comp. verb.* 22—24). It is dignified, weighty, slow in movement, and prone to contrasts of single words (e.g. γνωρισταί, δικασταί, δοξασταί, κριταί, *De caede*

Herod. § 94). The 'periodic' structure of sentences (λέξις κατεστραμμένη) is seen in the earlier and stiffer phase of its development from the 'running' style (εἰρομένη) in which clauses are simply strung together.

173. Andocides, born c. 440 B.C., gave evidence in 415 as to the mutilation of the Hermae; was sentenced in the same year to partial disfranchisement for alleged acts of 'impiety'; and went to Cyprus. Revisiting Athens in 411, during the oligarchy, he was imprisoned; returned to Cyprus on being released after the fall of the oligarchs; and again coming to Athens in 410, addressed the ecclesia in the extant speech *On his Return* (περὶ τῆς ἑαυτοῦ καθόδου), praying for the removal of his 'atimia.' His appeal was rejected, and then he spent some years in visiting various parts of Hellas. The general amnesty of 403 finally enabled him to return to Athens. In 399 he was brought to trial for 'impiety,' on the ground that he had attended the Mysteries at Eleusis though disqualified by 'atimia' from doing so, and defended himself in the most important of his extant speeches, *On the Mysteries*. He was acquitted. In the winter of 391—390, during the Corinthian war, he was one of the Athenian plenipotentiaries sent to treat for peace at Sparta, and in 390 made at Athens his extant speech *On the Peace with Lacedaemon*, urging that the terms offered by Sparta should be accepted. His advice was not taken. According to the pseudo-Plutarch (*Lives of the Orators*) he was again banished. The speech *Against Alcibiades* which bears his name is a late rhetorical forgery. Andocides is a vigorous speaker, generally plain in style and method, and relying but little on rhetorical artifice. The best example of his excellence in lively and graphic narrative is afforded by *De Myst.* §§ 34—69.

174. Lysias, a native but not a citizen of Athens, was the son of a Syracusan named Cephalus, who had settled there as a μέτοικος on the invitation of Pericles. The date of the orator's birth is uncertain: ancient authorities place it in 459/8; but recent critics, *circ.* 450—440: his extant work belongs to 403—380. After his father's death, he left Athens, while still a boy, for Thunii, where he passed his youth and early manhood. Driven from Thunii after the Athenian reverse in Sicily, he returned to Athens in 412, with his brother Polemarchus. In 404 the comparative wealth of the brothers marked them out for plunder by the Thirty Tyrants, who put Polemarchus to death. Lysias escaped; and returning in 403 with Thrasybulus and the exiles, settled down to work as a writer of forensic speeches. His industry seems to have been great. Upwards of 230 compositions bearing his name were recognised as genuine by the Augustan Atticists. We have 34 speeches (3 fragmentary, and 8 more or less mutilated), of which, however, six are spurious, viz. the *Epitaphios* (or. 2), *Against Andocides* (or. 6), *To his companions* (or. 8), *For the soldier* (or. 9), the second speech *Against Theomnestus* (or. 11), and the defence *For Polystratus* (or. 20). Of the 28 genuine pieces, the most important and brilliant

is the speech *Against Eratosthenes* (or. 12), spoken in 403 by Lysias himself against the man (formerly one of the Thirty Tyrants) who had been chiefly instrumental in the murder of Polemarchus. The peroration, on the crimes of the Tyrants (§§ 92—100), was famous. Next in historical interest stands the speech *Against Agoratus* (or. 13, c. 399/8), an informer who had slandered away the lives of many citizens during the tyranny in 404. The defence *For Mantiheus* (or. 16, c. 392) is a good example of the skill with which Lysias could adapt a speech to the ἦθος of the person who was to speak it—in this case, a high-spirited young Athenian. The ‘deliberative’ oratory of Lysias is represented only by a fragment of a speech written for delivery in the ecclesia, a *Plea for the Constitution* (or. 34 *περὶ τοῦ μὴ καταλύσαι κ.τ.λ.*, 403 B.C.): and his ‘epideictic’ oratory, only by the brilliant fragment of his *Olympiacus*, spoken at Olympia (388 B.C.).

The qualities for which Lysias was especially admired by the best ancient critics were, a delicate mastery of Attic, subtle expression of character (*ἠθοποιία*), vivid description (*ἐνάργεια*), and a certain flexibility of mind which gives him almost unfailling tact and charm (*χάρις*). Technically, he represents the ‘plain’ style (*ἰσχνὸς χαρακτήρ, λιτὴ ἢ ἀφελὴς λέξις, tenue or subtile genus dicendi*), as opposed to the ‘stately’ (*μεγαλοπρεπής*) and the ‘middle.’ He was the first rhetorical writer who reconciled literary finish with the Attic idiom of ordinary life.

175. Isocrates, born in 436 B.C., lost his patrimony in the later years of the war, and after teaching rhetoric at Chios for about a year (404—3), became a professional writer of forensic speeches at Athens. This period of his activity (403—393) is represented by six extant orations, among which the *Aegineticus* (or. 19, 394—3) is the best. In his later writings he speaks slightly of such work for the law-courts,—evidently regarding it as a mere accident of his early life. His true career began in or about 392, when he opened a school at Athens near the Lyceum. The nature of the discipline which he sought to impart is best gathered from his discourse *Against the Sophists* (or. 13, c. 391 B.C.), and from the speech *On the Antidosis* (or. 15, 353),—the latter being an *apologia* (‘an image of his mind and life,’ § 7), thrown into the shape of a forensic speech against a man who had challenged him to undertake the burden of the trierarchy or submit to an exchange of properties (*antidosis*). The art which he professes to teach is, briefly, that of speaking or writing on large political subjects, considered as a preparation for advising or acting in political affairs. This is ἡ τῶν λόγων παιδεία,—his φιλοσοφία, or theory of culture, as he sometimes calls it (*Antid.* § 50). He distinguishes this art (1) from all studies which have no direct bearing on the higher political life, and (2) from studies which, though practical, are narrow in scope (*e.g.* forensic rhetoric). Censuring teachers who claim too much for their method (*Adv. Soph.* § 10), he emphasizes the need of natural aptitude (*φύσις*) and of hard work in

the learner. His aim was to develop the faculty of his pupils through their own efforts (*Antid.* §§ 186—191). Many of them stayed with him three or four years (*Antid.* § 87). His school was famous throughout Hellas. Monographs have been written on the ‘disciples of Isocrates,’—a long and varied list of eminent names, including Timotheus, Leodamas of Acharnae, Lycurgus, Hypereides, Isaeus, and the historians Ephorus and Theopompus.

Twenty-one speeches or discourses (besides nine letters) bear the name of Isocrates, and all are probably genuine. Six (as noticed above) are forensic. Nine may be classed as scholastic; viz., three hortatory letters or essays (*To Demonicus*, *To Nicocles*, and *Nicocles*, oratt. 1—3); four ‘epideictic’ pieces (*Evagoras*, *Encomium on Helen*, *Busiris*, *Panathenaicus*, oratt. 9—12); and the two essays on education already mentioned (*Against the Sophists*, and *Antidosis*, oratt. 13 and 15). The remaining six pieces are political. Two of these concern the relations of Greece with Persia. The *Panegyricus* (or. 4, 380 B.C.) urges the Greek states to unite in an invasion of Asia: this is the author’s masterpiece, on which he is said to have spent ten years. The *Philippus* (or. 5, 346 B.C.) exhorts Philip of Macedon to lead a Panhellenic war against Persia. The other four political discourses deal with the internal affairs of Greece. The *Plataicus* (or. 14, 373) is a Plataean appeal to Athens for aid against Thebes. The speech *On the Peace* (or. 8, 355) exhorts Athens to abandon dreams of empire (*ἀρχή*), and content herself with *ἡγεμονία* of a free league. The *Archidamus* (or. 6, 366) purports to be spoken at Sparta by Archidamus III, in protest against the Theban proposal that Sparta should recognise the independence of Messene (restored by Epameinondas in 370). The *Areopagiticus* (or. 7, prob. 355) contrasts the Athens of the fourth century with that of Solon and Cleisthenes,—dwelling much on the old power of the Areopagus.

Isocrates died in 338, at the age of ninety-eight, just after the battle of Chaeroneia. He is said to have starved himself to death. If that is true, the cause can scarcely have been Philip’s success: rather, perhaps, the breach between Philip and Athens. But in *Epist.* III, purporting to be written after the battle, Philip is still his hope for Greece. If that letter be a forgery, it is a skilful one.

The work of Isocrates was to establish a standard type of literary rhetorical prose. His style is marked by a smoothness due to studied avoidance of ‘hiatus’; i.e. a vowel at the end of the word must not be followed (as a rule) by a vowel at the beginning of the next (*φωνήεντα μὴ συμπίπτειν*). In the *rhythm* proper to prose (*εὐρύθμως καὶ μουσικῶς εἰπεῖν*, or. 13, § 16) he was the earliest artist, as Cicero, his disciple in this, recognises (*Brut.* § 32). His *period* is not rigid, like that of Antiphon, nor terse and compact, like that of Lysias, but ample and luxuriant (*ὑπαγωγική*, ‘leading one on,’ like a winding river, Dionys. *Dem.* 4). The Isocratic prose had had a wide influence on Greek writing in his own

day, and later; it contributed to mould the style of Cicero (cp. *Ad Att.* II. 1); and through him, or directly, it has influenced modern literature.

176. Isaeus, born probably c. 420 B.C., was a professional writer of speeches for the law-courts, chiefly in private causes. The branch in which he chiefly excelled is represented by the eleven extant κληρικὸὶ λόγοι,—speeches connected, directly or indirectly, with will-cases. These are of great interest for the history of Greek testamentary law. There is also a large fragment of a twelfth speech, belonging to a different class,—a case of appeal (ἔφεσις) from arbitration to a jury. These belong to the period c. 390—353 B.C. The eighth speech, περὶ τοῦ Κίρωνος κλήρου, is the most characteristic, both in narrative and in argument, and shows Isaeus at his best. He is the earliest master, not, indeed, of forensic rhetoric, but of close forensic argument. His art is not, like that of Lysias, an art which conceals itself, but open, vigorous, and confident. There is no reason to doubt that the young Demosthenes studied with him (c. 366—363). 'The oratorical power (δευότης) of Demosthenes took its seeds and beginnings from Isaeus,' says Dionysius (*Isae.* 20). This is probably true in the sense that Demosthenes was indebted to Isaeus for hints (1) in versatile arrangement, (2) in elaboration of systematic proof, and (3) generally, in the method of grappling with an adversary's case point by point.

177. Demosthenes, born in 384 B.C., the son of a well-to-do Athenian, was left an orphan in childhood. His guardians, false to their trust, handed over to him when he came of age only a fraction (some £50 or £60 a year) of his patrimony. In 363 he brought an action against one of them (Aphobus) and obtained a verdict, but not the money; and, after some more fruitless proceedings, set about making his living as a λογογράφος for the courts. His political career was precluded by four speeches in public prosecutions, which are as many pleas for a high standard of public life (*Androtion* 355, *Leptines* 354, *Timocrates* 353/2 and *Aristocrates* 352). Of these the *Leptines* alone was spoken by Demosthenes himself: the other three were written for clients. The speech *Against Meidias* (347), who had assaulted him, was never delivered, and remains a mere sketch. Addressing the ecclesia during the same period, he propounded a scheme of naval reform in his speech *On the Navy Boards* (354); spoke *For the Megalopolitans* against Sparta (353/2), and *For the Rhodians* (352 or 353?) when they sought the help of Athens to throw off the Carian yoke.

His nine speeches against Philip of Macedon fall into two groups. The earlier group consists of the *First Philippic* (351) and the three *Olynthiacs* (349), spoken when Philip was still a foreign foe, threatening Greece from without. The second group comprises the speeches made after Philip had become a Greek power by admission to the Amphictyonic Council (346); viz., *On the Peace* (346), the *Second Philippic* (344), *On the*

Embassy (343, a forensic public speech), *On the Chersonese* (341), and the *Third Philippic* (341). In 336 Ctesiphon proposed that Demosthenes should receive a golden crown from the state. Aeschines then gave notice that he would proceed against Ctesiphon for having proposed an un-constitutional measure, but took no action till 330, when he delivered his speech *Against Ctesiphon*, an attack on the whole public life of Demosthenes. Demosthenes gained a decisive victory for himself, and for the honour of Athens, in the most finished, the most brilliant, and the most pathetic oration of antiquity, the speech *On the Crown*. In 322 he was one of the patriots whose surrender was demanded by Antipater. He fled to Aegina, and thence to the islet of Calauria, on the coast of Argolis, where he was found by his pursuers, and took poison.

The traditional collection of Demosthenic speeches, probably founded at Alexandria in the third century B.C., contains 61 pieces (including the Letter of Philip, no. 12). There is a large proportion of spurious matter; but in regard to many particular pieces the critics are much divided. Among the *συμβουλευτικοὶ λόγοι* ascribed to him, the following may be rejected:—*On Halonnesus* (or. 7), the work of Hegesippus, 342 B.C.: *On the Treaty with Alexander* (or. 17), 335 B.C., by some unknown contemporary: and three rhetorical forgeries of later date,—viz., the *Fourth Philippic* (or. 10), *On Financial Organisation* (*περὶ συντάξεως*, or. 13), and *the Answer to Philip's Letter* (or. 11). [The *Letter of Philip*, printed as or. 12 among the Demosthenic writings, may be genuine.] Among the *δικανικοὶ λόγοι*, the following in public causes (*δημόσιοι*) are spurious:—*Against Neaera* (or. 59, c. 343—339 B.C.), *Against Theocrines* (or. 58, c. 340), and the two speeches *Against Aristogeiton* (or. 25, 26—rhetorical forgeries). The following speeches in private causes (*ιδιωτικοὶ*),—arranged in the alphabetical order of the names of those against whom they were spoken,—are spurious, but all or most of them were probably written between 369 and 322 B.C.:—*Apaturius* (or. 33), *Boeotus II* (40), *Callippus* (52), *Dionysiodorus* (56), *Euergus and Mnesibulus* (47), *Lacritus* (35), *Leochares* (44), *Macartatus* (43), *Nicostratus* (53), *Olympiodorus* (48), *Phaenippus* (42), *Phormio* (34), *Polycles* (50), *Stephanus II* (46), *Timotheus* (49), *Zenothemis* (32). The two *ἐπιδεικτικοὶ λόγοι*, *Epitaphius* (or. 60) and *Eroticus* (61), are spurious. Quintilian (x. i. 107) knew letters of Demosthenes which he thought genuine. The extant six letters (or some of them, especially nos. 2 and 3) have had defenders, but seem to be forgeries. The 56 *προόμια*, exordia or sketches for political speeches, have been compiled from Demosthenes or other classical models by various hands and at various dates.

Demosthenes is the greatest artist in Greek prose, commanding all the resources of technical rhetoric, and blending the best traits of earlier styles in new combinations, without a trace of conscious effort. He has a great variety of tones, and no less diversity in his arrangement of topics, which (in the political speeches especially) is often intricate, yet always

leaves an impression of organic unity. He does not allocate one section of his speech to narrative, another to argument, a third to emotional appeals, and so on; they are skilfully intermingled; facts are connected with principles; thought is penetrated by feeling; and the whole is fused together by the fire of a powerful and ardent mind. Like Burke, he is a representative of impassioned reason. No orator is more sparing in the use of ornament for its own sake: in all his work it would be hard to find a 'purple patch.' As John Bright found a well-spring of eloquence in the plain and noble diction of the Bible, so Demosthenes uses the simplest language without loss of distinction, and gains a persuasive naturalness without falling into commonplace.

One of his characteristic qualities (in which he resembles but excels Isaeus) is his manner of grappling with his adversary in close argument, animated by lively question and answer, pointed with incisive irony, and driven home with cogent vehemence. His pathos is of that austere and reticent kind which marks the seventh book of Thucydides, a writer with whose genius study and nature had placed him in the most intimate sympathy. Demosthenes on the desolation of Phocis (or. 19, §§ 65, 66) might be contrasted with Burke on the devastation of the Carnatic. It would not be easy to surpass the indignant irony of the *Third Philippic* (§§ 65, 66), or the restrained sarcasm which marks the earlier part of the speech *On the Chersonese*; and there are occasional touches of grim humour, as when, in the speech *On the Crown*, he compares Aeschines to a physician who prescribes after the funeral. His perorations are usually quiet, in that Attic taste which preferred that a speech, like a Tragedy, should close calmly; and he often concludes with a wish in which the final word is *εὐφημον*,—as in the *First Philippic*,—*νικῶν δ' ὅ τι πᾶσιν ὑμῖν μέλλει συνοίσειν*.

The 'private' forensic speeches—which he occasionally wrote, amidst the stress of his political career, down to at least 345 B.C.—are nearly all for plaintiffs; and he puts forth his strength in attack with the open art of Isaeus. It is but seldom that, as in the speeches *Against Conon* and *Against Callicles*, he portrays, like Lysias, the *ēthos* of the 'plain citizen' who delivers the speech.

Laborious premeditation was his rule (cp. or. 21, § 191 *ἐσκέφθαι—μεμελετηκέναι—μεριμνήσας*). Careful composition is indicated by the Isocratic avoidance of hiatus, though this rule is less strict in the later speeches; and by the unique rhythm governing those subtle harmonies which modern criticism has sought to analyse. We may accept the tradition that he rarely extemporised,—distrusting, perhaps, his own impetuosity. Of his deliberative speeches, none would have taken much more than an hour to speak: a limit which is natural, seeing that they were to be spoken in the open air, and to an audience of many thousands. It is possible that the written speech was sometimes amplified in delivery: but in one instance, at least, which can be roughly

tested—the speech *On the Embassy*, as compared with the reply Aeschines—the written text must be nearly that which was spoken.

The form of Demosthenic oratory is inseparable from the spirit of the man and the statesman. His aim was to revive public spirit at Athens, purify the administration at home, and to invigorate the foreign policy. Athens was to him a noble but wayward person, of a generous character with some dangerous faults (τὸ τῆς πόλεως ἦθος, or. 20, § 13). A statesman must be sincere, fearless in speaking out, and mindful that he is responsible (ὑπεύθυνος) to the state. The only stable national power that which rests on truth and justice (or. 2, § 10). ‘Beware not to exhibit as a nation conduct which you would shun as individuals’ (or. 20, § 13). The struggle against Philip, which Demosthenes maintained, almost single-handed, for thirteen years, must not be judged in the light of events which he could not foresee. He was right, on every ground, in holding that Athens should stake her existence, as the champion of Greece, defending the best thing that Greeks had known, the life of the free citizen. To fail in that cause was better than not to have striven (or. 18, § 20) not merely because, in the event, Athens fared better than the coward and traitors (*ib.* § 65), but because the Athenians had been true to themselves and to Greece.

178. Aeschines, an Athenian born in 390 or 389 B.C. (as or. 1, § 1 shows), began life in narrow circumstances, and was for time a tragic actor,—a calling for which he had the qualifications of a fine appearance and a magnificent voice. He afterwards became clerk (γραμματεὺς) to the Ecclesia. In 346 he was twice an envoy to Philip. His speech *Against Timarchus* (345) aims at showing that the man—who was about to charge the orator with misconduct on the embassy in 346—was disqualified by an infamous life from speaking in the Assembly. The speech *On the Embassy* (343), a defence against his fellow-envoy Demosthenes, is extremely able, and contains some admirable passages of narratives; it just won him an acquittal. The speech *Against Ctesiphon*, attacking the whole career of Demosthenes, was an ignominious failure. He then withdrew to Ephesus, and afterwards opened a school of rhetoric at Rhodes. The date of his death is unknown. Aeschines has brilliant natural gifts for eloquence. In the art he was deficient; his style is uneven, and can fall low: but it often exhibits the ‘splendour which both Dionysius and Cicero recognise. He can be edifying and lively; his attack is vigorous and adroit; he has wit and pathos. It is the ἠθικὴ πίστις that is lacking; he fails to inspire trust.

179. Lycurgus (born *c.* 390), a member of the noble priestly clan of the Eteobutadae, served Athens from 338 to 326 B.C. as minister of finance and of public works; the precise title of his office (or offices) is uncertain. His only extant speech is that *Against Leocrates* (*c.* 331), who had fled from Athens after Chaeronea, and was indicted as a traitor. It is a solemn and lofty protest on behalf of public

spirit, blending the luxuriance of Isocrates (the author's master in composition) with something of the archaic stateliness of Antiphon.

180. Hypereides (born c. 389 B.C.), also a pupil of Isocrates, is now represented by portions of six speeches, found in Egypt between 1847 and 1890. 1. *Against Demosthenes*, in the Hypereides. Harpalus affair (324); a fragment, much mutilated: papyrus of second century A.D., found in 1847. 2. *For Lycophron* (before 338); a fragment of the earlier part, much mutilated: same MS. 3. *For Euxenippus* (c. 330—324); almost entire: same MS. 4. *Against Philippides* (c. 336); the latter part: papyrus of first century B.C., found in 1890. 5. *Against Athenogenes* (c. 328—326); the greater part, but the beginning is lost: papyrus of second century B.C., found in 1888. This typical speech is coupled by the author of the treatise 'On the Sublime' (ch. 34, § 3) with the orator's defence of Phryne as an example of his fine tact and skill. 6. *Epitaphios* (322) on Leosthenes and his comrades who fell in the Lamian war; imperfect at the end (but partly supplemented by Stobaeus *Flor.* 124. 36): papyrus of late first or early second century A.D., found in 1856. Hypereides unites the most varied qualities; a smooth fluency, joined to force, rapidity and fire; keen wit and sarcasm; a diction now lofty and now colloquial; the subtlest art, veiled by an easy grace. He was not a statesman, nor a man of estimable character; but a supremely brilliant and versatile Athenian.

181. Deinarchus (born c. 365—360), a native of Corinth who lived at Athens as a *μέτοικος*, wrote speeches for the law-courts, of which three remain,—those against Demosthenes, Aristogeiton, and Philocles, when they were accused of taking bribes from Harpalus (324 B.C.). He was called (according to Hermogenes) a *κρίθινος Δημοσθένης*, perhaps because his coarse imitation was to the original as beer to wine. His name completes the Alexandrian decade of Attic orators. Deinarchus.

182. From about 300 to 280 B.C. the new settlements in Asia Minor were the places where the study of oratory chiefly flourished. The old eloquence had been a fine art; the new was little more than the practice of set declamation, with a bent towards bombast or forced point. This tendency has been called 'Asianism,' in contrast with the classical Atticism. A reaction in favour of the Attic standards began towards the close of the second century B.C. The maturity of the 'Attic revival' is represented at Rome, in the Augustan age, by the best literary critic of antiquity, Dionysius of Halicarnassus. 'Asianism'
versus
'Atticism.'

F. PHILOSOPHICAL PROSE.

183. Philosophical prose-writing began in Greece with the Ionian monists of the sixth century, Thales, Anaximander, Anaximenes, Heraclitus. Their views, and the later developments of Greek Philosophy, are set forth in another section of this book. Here we have only to note the relation in which Plato and Aristotle respectively stand to the literature of Greek prose.

184. Plato (born *c.* 429—427, died 347) is the greatest master of the *Dialogue*, as he is also the earliest whose work survives.

Plato.

Three chief aspects of his style may be distinguished.

(1) His mode of representing *conversation* is easy, flexible, urbane, with a lightly playful wit and a delicate irony; shades of character and of manner in the persons are often marked with subtle skill. Some of the best examples occur in the opening scenes of dialogues (*e.g.* *Phaedrus*, *Gorgias*, *Protagoras*, *Republic*). (2) Another phase is seen in passages of *continuous exposition*. Some of these, especially such as speak of the philosophic life (*e.g.* *Theaetetus* pp. 173—175), or of the soul in its relation to the quest of truth (*e.g.* *Symposium* 201 D—212 A), exhibit his style in its highest elevation; the language is remarkably copious, sometimes, indeed, verging on redundancy (see *e.g.* *Sympos.* 211 B—C); it flows on in a stream of eloquence which is never rhetorical, though at times of a poetical cast; an intense earnestness, a certain glow and rapture, can be felt in it. (3) Then there are the passages of *narrative* or *description*. The chief examples are the four longer myths, concerning the destiny of the soul after death (*Gorgias* 523 A—527 A, *Phaedo* 109 A—114 C, *Republic* 614 A—621 B), or its experience before birth (*Phaedrus* 246 A—250 C). In these we note the strength and clearness of the sublime imaginative vision; the great simplicity of language; and the use (in a manner resembling Dante's) of homely images to render particulars distinct. Plato's power as a literary artist can, however, be adequately appreciated only by studying one of his dialogues (*e.g.* the *Phaedo*) as an organic whole. His prose is unique; partly because he alone conveys a notion of the manner in which intellectual Greeks of that age talked among themselves; and partly, again, because his style so often moves in a borderland between prose and poetry (*μεταξὺ ποιήματος...καὶ πρῶτου λόγου*, as Aristotle said, according to Diogenes Laertius III. 37).

185. Aristotle (384—322), in his treatises as they have come to us, shows small care of literary form. It is indeed probable

Aristotle.

that (in many cases at least) they are merely sketches for lectures, or summaries based on notes taken by hearers. They are examples of a strictly scientific prose, in which the first aim is precision of statement. A marked characteristic of Aristotle's writings is the frequent use of philosophical terms (such as *ὑλη*, *οὐσία*, *τὸ τί ἦν εἶναι*, *ἐντελέχεια*,

δύναμις, etc.), either invented or made technical by himself. There are, indeed, passages which are impressive in a literary sense, though more by the thought than by the form (e.g. that on the θεωρητικὸς βίος in *Ethics* x. vi): there are also many striking sentences or phrases (e.g. the precept *ὄσον ἐνδέχεται ἀθανατίζειν* in *Eth.* xii. vii). In his lost Dialogues (written perhaps c. 362—347), which were of an 'exoteric' or popular character, he is said to have used the embellishments and graces of literary art. This is attested by Cicero (*Acad. Prior.* ii. 38. 119, *veniet flumen orationis aureum fundens Aristoteles*), Dionysius (*Vet. Script. Cens.* iv. 1), Quintilian (x. i. 83), Themistius (or. 26, p. 385), and others. The tradition is illustrated by at least one extant fragment (no. 40, p. 1481) from Aristotle's dialogue entitled *Eudemus*.

Two of his works have a direct bearing on Greek literature.

1. In the *Rhetorica* (composed c. 330), he treats that art as the popular branch of dialectic. It is the method of 'discerning in every case the available means of persuasion'; and these are of two classes. (1) There are the 'proofs external to the art,' *ἄτεχνοι πίστεις*, such as depositions of witnesses, or documents. (2) Then there are the proofs furnished by the art itself, *ἔτεχνοι*, which are of three kinds; (i) *λογικὴ πίστις*, proof, or seeming proof, by argument; (ii) *ἠθικὴ*, when the speaker persuades the hearers that he is trustworthy; and (iii) *παθητικὴ*, when he works upon their emotions. Books 1 and 11 concern the method of providing these proofs (*εὐρεσις*). Book 111 begins with remarks on delivery (*ὑπόκρισις*), regarded chiefly as management of the voice. It then deals with expression (*λέξις*, diction and composition), and arrangement (*τάξις*). Aristotle fixed the main lines on which Rhetoric was treated by most of the later technical writers.

2. The present form of the *Poetica* is incomplete. The first book (in 26 chapters) alone is extant, and its text has been much disturbed: of the second book, which dealt with Comedy, only fragments remain. Imitation (says Aristotle), *μίμησις*, is the principle common to Poetry with Music, Dancing, Painting and Sculpture. All these arts are imitative, while the means, objects and manner of imitation differ in the several arts, as also in the several branches of Poetry (i—iii). Tragedy and heroic epos imitate the nobler aspects of life; satire and comedy, the lower (iv, v). Poetry can generalise; it can express the universal through the particular (e.g. Achilles is a typical or 'ideal' hero): and therefore 'Poetry is a more philosophical and a higher thing than History' (ix. § 3), which tends to express only the particular. Tragedy is defined and analysed, with profound insight (vi—xix). The function of Tragedy consists in 'effecting, through pity and fear, the proper *purgation* (*κάθαρσις*) of these emotions' (vi. § 2). The metaphor is medical: Tragedy excites pity and fear; and, in doing so, affords a wholesome outlet to those emotions, attended by a pleasurable sense of relief: in the words of Milton's comment (preface to *Samson Agonistes*),

it tends 'to temper and reduce them to just measure with a kind of delight.' Some critics, from the sixteenth century onwards, found in Aristotle a doctrine of the so-called 'Three Unities.' But this was incorrect. Organic *unity of action* is the only dramatic 'unity' enjoined in the *Poetics* (viii, ix). The sole reference to a unity of *time* is in v. § 4: 'Tragedy endeavours, as far as possible,' to confine the duration of the action to one day of twenty-four hours: *i.e.* this was the ordinary practice,—sometimes, however, neglected (as by Aeschylus in the *Agamemnon* and *Eumenides*). As to unity of *place*, there is not a word: that, too, was usually observed on the Greek stage, but not always. From Tragedy the treatise passes to the subject of poetic diction at large (xx—xxii; here there has been a good deal of interpolation): and closes with a briefer treatment of Epic Poetry, chiefly in its relation to Tragedy. Fragmentary though the work now is, it is a contribution of lasting value to the theory, not only of Poetry, but of Fine Art in general.

G. LITERATURE OF THE ALEXANDRIAN AND ROMAN AGE.—POETRY.

186. The latter part of the fourth century B.C. is the moment at which the best period of Greek literature,—that which is more especially called 'classical,'—may be considered to end. Down to that time Greek literature had been creative. No pre-existing pattern guided the great artists who first shaped the epos, the elegy, the various forms of iambic or lyric poetry, and the Attic drama; no tradition prescribed the form adopted by the first great historians and orators. From 'Homer' to Demosthenes, every one of these men was a true 'maker.' And this creative literature, throughout the course of its spontaneous and natural growth, was in touch with life. Epic poetry was heard in the halls of Achaean chiefs, or, later, by the crowds that thronged around the rhapsode. Elegy, iambic verse, and the Aeolian lyric, were social. The choral lyric had its place at religious festivals and at the national games. Drama belonged to the cult of Dionysus in his theatre. The orator addressed himself to the jurors in the law-court or to the public Assembly. The historians, such as Herodotus, Thucydides or Xenophon, were men who drew on their own practical experiences, and whose most attentive readers would be men of action, fain to gather lessons useful in politics or in war. The great literature of Greece was animated by the political freedom, the popular faith, and the social interests of the Greek city.

There is thus a twofold justification for the line commonly drawn between the Hellenic and the Alexandrian period. First, all the principal types of literature had been created before the earlier period closed. Secondly, all the conditions of literary production were changed. The Athenian poet of the fifth century, composing for the benefit of his

fellow-citizens at the Dionysia, was in a totally different case from the poet writing at Alexandria, with its motley and polyglot population of 800,000. The Alexandrian was a man of letters, usually dependent on patrons, or on the favour of some literary clique among 'the reading public.' The Alexandrian literature never makes on the modern imagination that special demand which is made by the Hellenic; one has not to conceive, as inspiring and welcoming it, a form of civic life that has vanished. It is a literature of the study.

and of the
Alexandrian.

But, while there are these plain grounds for drawing a line between Hellenic and 'Hellenistic,' it is all the more needful not to misapprehend or undervalue the later Greek literature. It was a prolific and a versatile literature, which lived on for some seven centuries, producing a marvellous amount of permanently valuable and interesting work. It was, in the main, imitative and reproductive, not creative. The great moulds of artistic Greek composition had been made once for all. But there was still abundant scope for personal originality, for the expression of individual genius, for the exercise of taste and humour in modifying the traditional forms of poetry or prose by local colouring or characteristic style. Originality, in the sense thus defined, appears from age to age in almost every branch of the later literature. It is enough to name four writers, in each of whom the distinctive excellence is of an original stamp,—Theocritus, Polybius, Plutarch, and Lucian.

Value of the
later Greek
literature.

187. The course of the later literature from about 300 B.C. to A.D. 500 or 600 might be treated as consisting of two principal periods, between which the opening of the Augustan age is the point of division; and there is much to be said for such an arrangement as a convenient aid to the memory. It does not, however, correspond with any break of inner continuity. A new era might more truly be said to date from the completion of the Roman conquest of Greece (146 B.C.), after which the Greek literature of the West gradually passed more decidedly under Roman influences, being more and more occupied with its function of educating the conquerors. Yet even here we cannot speak of an epoch assignable to a definite date; it is rather a new set of tendencies, which, by degrees, become more marked. For the purposes of a sketch like the present, it is better to take simply (1) the literature of verse, and (2) the literature of prose, and to trace each from the beginning of the Alexandrian age to the later times of the decadence.

Relation of
the Alexan-
drian to the
Roman period.

188. Callimachus (c. 260 B.C.), a learned critic and scholarly poet, is our best representative of the prevailing Alexandrian taste in his day. His hymns to *Zeus*, *Apollo*, *Artemis*, *Delos*, and his *Calathus of Demeter* are pedantic and frigid. The elegiac *Δουτρά τῆς Παλλάδος* is his best extant piece (it relates the blinding of the seer, so splendidly told in Tennyson's

Poetry of the
third and
second cen-
turies B.C.—
Callimachus.

Tiresias). Catullus translated his lost *Lock of Berenice*; Ovid imitated his *Ibis*, and took hints for the *Fasti* from his *Αἴτια* ('origins' of sacred tradition and usage). Part of his *Hecale* (an idyllic epic) was recovered in 1893. Some of his 74 epigrams are good; one of them, on the death of Heraclitus, is familiar to English readers through William Johnson (Cory)'s version, which in beauty comes near to the original. His ideal was the short, highly-polished poem,—in his own phrase, *πίδακος ἐξ ἱερῆς ὀλίγη λιβάς, ἄκρον ἄωτον*.

189. The proverbial *μέγα βιβλίον μέγα κακόν* was his saying,—a pointed allusion to the *Argonautica*, in four books, by his younger contemporary, Apollonius of Rhodes, who found his motive (one can hardly say his model) in Homeric epos.

Apollonius
Rhodius.

Apollonius uses an imitative epic diction; in place of the old epic life and fire, he has elaborate picturesqueness, many touches of true observation, and sometimes a vein of dreamy pathos. His mingling of these with an epic manner produces much the same sort of effect as the blending of medieval with classical elements in William Morris's *Jason*. The *Argonautica* seems to have been coldly received; but it lived to be studied by Virgil.

190. Theocritus, born at Syracuse, to which he returned in his later years, flourished at Alexandria in the reign of Ptolemy

Theocritus.

Philadelphus (285—247). His bucolic idylls, the oldest extant examples of pastoral poetry and the patterns of nearly all later work in that kind, are inspired by a true feeling for the rural life and scenery of his native Sicily. There was, doubtless, in Sicily some bucolic folk-poetry to build on; the ancient, like the modern, shepherds of Greece must have had their songs. Then the Dorian Sicilians Epicharmus and Sophron had dramatised little scenes from real life, some of them, probably, rural. The idylls of Theocritus are not sham pastorals, of the kind which 'royal goatherds in silk and lace' sang and danced in the seventeenth century; they are not even conventional in the sense of Virgil's *Eclogues*: they make one breathe the air of the Sicilian uplands and coasts, and the rustics in them, even if somewhat idealised, are alive.

The word *εἰδύλλιον* was used to denote a cabinet-picture in verse, a short poem with local colour and pretty detail. When it came into use, we do not know: Pliny was familiar with it ('*sive idyllia sive eclogas*,' *Ep.* iv. 14). Some think that it meant merely 'style,' a qualifying epithet being added; e.g. a pastoral piece might be headed *βουκολικόν εἰδύλλιον*: but, in that case, it would be strange that the distinctive epithet should have been dropped, and the colourless word used with a specific meaning. The collection of 'idylls' bearing the name of Theocritus includes pieces of various classes. Five, at least, to judge by internal evidence, are not his; viz. XIX, XX, XXI (beautiful in itself), XXIII, and XXVII.

The famous *Adoniazusae* (xv) is a scene from common life which approaches to the character of a *μίμος*: the same might be said of xiv. There is a group of poems in which some phase of love is the leading

motive; including the two lyric pieces in the Aeolic dialect, modelled on Alcaeus (xxviii, xxix). Then there is a series of short poems in which the material is epic or mythological (Heracles, Hylas, Pentheus, Dioscuri, etc.); where Theocritus is seen more under the influence of Alexandrian taste, yet nearly always rising above the tame pseudo-epic method by a certain alertness of fancy and vivacity of treatment. Of the epigrams ascribed to him, several are pretty, but some at least are spurious: nos. 7, 9, 11, 15, 16, 20, 21 are attributed in the Anthology to 'Leonidas of Tarentum or Theocritus,' or to the former alone. Theocritus is the last genuinely inspired poet of Hellas, a fresh and living voice in an age of literary mannerism; one of the most beautiful and lovable of the world's poets.

191. The *Europa* of Moschus of Syracuse (c. 150 B.C.) is a little gem of descriptive poetry, genuinely Alexandrian where it shows its indebtedness to some painting of the maiden riding the bull (verses 125—129). Bion of Smyrna (c. 100) is now best represented by his brilliant but rather florid *Lament for Adonis* ('Ἐπιτάφιος Ἀδώνιδος). His death (c. 80) is mourned by an anonymous pupil in the *Lament for Bion*, once ascribed to Moschus, a piece of exquisite music and pathos. Moschus and Bion are always classed as 'bucolic'; but, so far as their remains show, they would be better described by the more general term 'idyllic.'

Moschus
and Bion.

192. Here may be noticed two characteristically Alexandrian productions, one akin to tragedy and the other to comedy. The Ἀλεξάνδρα (= Κασσάνδρα) of Lycophron, a tragic poet (c. 260 B.C.), is a monologue by Cassandra in 1474 iambic trimeters, prophesying all that would come of her brother Paris going to Sparta. It is a display of recondite learning in diction and mythology. Every device which can darken language, metaphor, and allusion is concentrated in this prodigy of exulting pedantry. Timon of Phlius (c. 280), a disciple of the sceptic Pyrrhon, satirised the non-sceptical schools of philosophy in poems called σίλλοι. Lucian uses the word σίλλος in the sense of 'squinting.' As applied to satire or lampoon, the term may have arisen from the notion of presenting a subject in a humorously distorted view. These σίλλοι were in three books of hexameter verse, of which II and III took the form of a satiric Νέκυια, where Timon spoke with the shades of the wise. Only fragments (about 140 verses) remain.

Lycophron.
Timon.

193. Aratus of Soli in Cilicia (c. 270 B.C., or perhaps somewhat later) has left two poems, (1) Φαινόμενα, in 732 hexameters, an unscientific and inaccurate description of the constellations and the circles of the sphere, versified from a prose work by Eudoxus of Cnidus (c. 360 B.C.); and (2) Διοσημεία, in 422 verses,—a supplement to the former,—*Prognostics* of weather, which he seems to have taken chiefly from Hesiod and Theophrastus. Cicero and other Romans translated Aratus. St Paul quoted at Athens τοῦ γὰρ γένος ἐσμὲν from *Phaenom.* 5 (Acts xvii. 28).

Didactic and
learned poetry.

Nicander of Claros, a physician (c. 150 B.C.), wrote (1) *Θηριακά*, in 958 hexameters, on venomous animals and the wounds which they inflict, and (2) *Ἀλεξιφάρμακα*, in 630 vv., *Antidotes* to poison; works noteworthy for some points of zoological or old medical lore.

Akin to these are the much later poems which bear the name of Oppian (c. A.D. 180), viz. (1) *Ἀλιευτικά*, an epic in five books, of which I and II deal with the natural history of fishes, and III—V with the art of fishing; (2) *Κυνηγετικά*, an epic on hunting in four books,—inferior to the other as a composition, but of some interest for zoology. It has been held, not without strong reasons, that these two poems are of different authorship; but the personality of Oppian is utterly obscure. A third epic which bore his name, but is now known only through a prose paraphrase of part of it, is *Ἰξεντικά* (*Fowling*).

There was also a learned epos of mythology and of history, represented by Rhianus (220 B.C.) in his lost *Ἡράκλεια*, *Ἀχαιικά*, *Μεσσηνιακά*, etc.; and by Euphoriion of Chalcis (*flor.* c. 235 B.C.), also an elegiac poet, one of whose epics, called *Μοῦσοπία* (an old name of Attica, according to Suidas), dealt with various Attic myths.

194. After the second century B.C. the graver and more ambitious forms of Greek poetry almost cease. Quintus of Smyrna (formerly called *Calaber*, because first known to modern scholars through a MS. found at Otranto) cannot be placed much before 400 A.D., and was possibly somewhat later. His *Τὰ μεθ' Ὀμηρον*, a sequel to the *Iliad* in fourteen books, carrying the story to the capture of Troy, is smooth and tame,—but not without antiquarian interest and value. Nonnus (c. 425 A.D.?), an Egyptian Greek, wrote an epic *Dionysiaca*, in forty-eight books, on the adventures of the god. Chaotic in matter and turgid in style, it is curious for some metrical peculiarities in the structure of the hexameter which seem to indicate that the older Greek 'pitch-accent' had become (or was tending to become) the modern 'stress-accent' as seen in the Byzantine *πολιτικοὶ στίχοι*. Orphic mysticism, too, is represented by poetry which may probably date from the second or third century A.D., and may have been the work of Egyptian Greeks; viz. (1) *τὰ Ὀρφέως Ἀργοναυτικά*, in 1384 hexameters, making Orpheus, bard, prophet and enchanter, the central figure of Jason's world; (2) the *Διτικά* (768 vv.), on the talismanic virtues of rare or precious stones; and (3) the eighty-seven 'Orphic' hymns, with which the eighth 'Homeric' hymn (to *Ares*) is not unreasonably classed by Hermann.

195. The 'mimes' of Herodas (first published in 1891, from a papyrus containing seven nearly complete poems, besides fragments) represent a species of composition which was, no doubt, popular, but of which we had hitherto possessed no example. They are little scenes from common life, dramatised in choliambic dialogue (*μυμιάμβοι*): 'The Schoolmaster'—'A jealous woman'—'A visit to Asclepius,' etc. The realism is sometimes rather repulsive, but

The later
heroic or
mythic epos.

Minor forms
of poetry.

there is rare dramatic skill, much humour, and some pathos. Nothing is known about their author. He was familiar with the island of Cos, which is the scene of at least two mimes (ii and iv); and probably lived *c.* 300—250 B.C. [See the edition by J. A. Nairn, 1904, p. xv.]

Babrius (an Italian, to judge by the name), who is now generally placed *c.* A.D. 100, turned into choliambic verse 137 fables, mostly of the 'Aesopic' kind,—using, probably, some late collection in prose. These *μυθίαμβοι Αἰσώπειοι* are of much literary and linguistic interest, but the naïve spirit of the old Greek beast-fable (*αἶνος*) is overlaid with modern scepticism and 'sophistic.'

196. One modest rill of poetry runs through the entire course of the later literature, beginning before Alexandrian days, and long outlasting the fall of the Western Empire. This is the elegiac,—descended, without a break, from the age of Callinus and Mimnermus. Erotic elegy more especially flourished in Macedonian and Roman times. Hermesianax of Colophon (*c.* 320 B.C.) was one of its exponents, but far less famous than his younger friend Philetas of Cos (*c.* 300 B.C.), whom Ovid imitated, and whom Propertius preferred to Callimachus. Other elegists of note were Asclepiades of Samos (*c.* 290 B.C.); Euphoriion of Chalcis (*c.* 235 B.C.); Antipater of Sidon (*c.* 100 B.C.); Meleager of Gadara (*c.* 60 B.C.); Crinagoras of Mytilene (*c.* 20 B.C.); Palladas of Alexandria (*c.* A.D. 400); Paulus 'Silentiarius' (*c.* A.D. 540, chief of the *silentiarii* or secretaries of Justinian); and Agathias (*c.* A.D. 580).

Continuity
of elegiac
poetry.

197. The short *ἐπίγραμμα* of from one to four couplets was the favourite form of elegiac composition. These 'epigrams' are of various classes, such as the amatory (*ἔρωτικά*); convivial (*συμποτικά*); satirical (*σκωπτικά*); dedicatory, especially inscriptions on works of art or votive offerings (*ἀναθηματικά*); hortatory (*προτροπικά*); sepulchral (*ἐπιτύμβια*).

The 'epi-
gram.'

Collections of *ἐπιγράμματα* (chiefly of inscriptions on *ἀναθήματα*) were made in the Alexandrian age, the earliest on record being that of the geographer Polemon (*c.* 190 B.C.). The first collection of epigrams on all subjects was the 'Garland' (*Στέφανος*) of Meleager (*c.* 60 B.C.), which represented forty-six poets, from the earliest times onwards. The title *Ἀνθολογία* seems to have been first used by Philip of Thessalonica (*c.* A.D. 110?). The next important collection was the *Κύκλος ἐπιγραμμάτων* by Agathias (*c.* A.D. 580), in seven books. Using these and other materials, Constantinus Cephalas (who appears to have flourished *c.* 920 A.D.) put together the great *corpus* (representing upwards of 320 writers) now known as the *Palatine Anthology*, because it was found in the Palatine Library at Heidelberg by Salmasius (Saumaise), about the year 1606. The *Planudean Anthology*, in seven books, was compiled by Maximus Planudes, a monk of Constantinople (*c.* 1300), who appears to have done little more than abridge and re-arrange the work of Cephalas.

Anthologies.

198. The foregoing sketch will have served to show that the Greek poetry written after *c.* 300 B.C. attains to excellence only in one form,—that of elaborate finish, with beauty or prettiness of detail, within a small framework. This excellence is raised to its highest level by the genius of Theocritus. But the general conditions are the same in the hymns or epigrams of Callimachus, in the mimes of Herodas, and in the various phases of elegy from Philetas to Agathias. In the epics, on the other hand, whether heroic or didactic, art fails to compensate for the lack of inspiration.

H. PROSE OF THE ALEXANDRIAN AND ROMAN AGE.

199. Meanwhile, in contrast with this narrowly limited sphere of merit in verse, the Greek prose literature of the Alexandrian and Roman age is full of varied energy. It finds scope in almost every branch of knowledge and every form of composition. A general view of this literature can best be given by taking separately the main lines of development, and indicating some of the principal works in each.

200. For Greek mathematics and astronomy the third and second centuries B.C. were almost such a period as the fifth century B.C. had been for literature,—a time of original work by men of genius. These men are dealt with in a separate section of this book. But one of them, Eratosthenes (*c.* 234 B.C.), the successor of Callimachus in the headship of the Alexandrian Library, was eminent in letters as well as in science. In addition to his mathematical writings, he was the author of poetical, philosophical, historical and critical works, thus meriting the title of *ὁ πένταθλος*. His treatise *On the Old Comedy*, in at least 12 books, seems to have dealt with every part of the subject,—theatres, scenery, actors, dresses, poets, their themes and their styles.

201. The labours of the Alexandrian critics were fruitful in revised texts (*ἐκδόσεις*) of the best Greek writers, especially the poets, and in commentaries (*ὑπομνήματα*) upon them. The older of the extant scholia on Homer, Pindar, the dramatists, Theocritus, Thucydides, Demosthenes, Plato and Aristotle are largely indebted to these labours, and are now the principal sources from which some idea of their scope and method may be gleaned. Reference has already been made (§ 136), in connexion with Homer, to the work of Zenodotus (*c.* 280 B.C.), Aristophanes of Byzantium (*c.* 195 B.C.), and Aristarchus (*c.* 180—160 B.C.). The poet Callimachus (*c.* 260 B.C.), who succeeded Zenodotus as head of the great Library at Alexandria, was best known as a critic by his catalogue, in 120 books, of the chief writers in every branch of literature (*πίνακες τῶν ἐν πάσῃ παιδείᾳ διαλαμπάντων καὶ ὧν συνέγραψαν*). The enormous industry of Didymus (*c.* 30 B.C.), the latest of those

Alexandrian scholars whose writings were a mine for the scholiasts, seems to have been largely employed in digesting and abridging the work of his predecessors. [Cp. *De Demosthene commenta*, ed. 1904.]

202. Besides endeavouring to discriminate authentic from spurious writings, the eminent Alexandrian critics of the third and second centuries B.C. exercised a kind of censorship by selecting the best writers in each kind from the enormous mass of literature, good, bad, and indifferent, which had come down to them. Thus they chose out four heroic poets (with Homer at the head), three iambic, four elegiac, nine lyric; nine historians, ten orators, and so on. The term for including an author in one of these select lists was *ἐγκρίνειν*: e.g. the orator Deinarchus is described by Suidas as *τῶν μετὰ Δημοσθένους ἐγκριθέντων εἷς*. Quintilian renders this term by *in numerum redigere* (x. 1, § 54), or *in ordinem redigere* (1. 4, § 3). As each writer so selected was, in his way and degree, a norm of excellence (*κανών*), the select lists themselves were called *κανόνες*. Aristophanes and Aristarchus probably bore the chief part in framing these lists, so far, at any rate, as the poets were concerned (*poetarum iudices*, Quint. x. 1, § 54). These 'canons,' while merely confirming the fame of great authors whose popularity was already secure, doubtless had some influence in condemning to relative obscurity such lesser writers as the critics ruled out (*exemerint numero*, Quint. 1. 4, § 3), and, so far, must have affected their chances of survival. The definite line thus drawn by the Alexandrians between writers who are, and who are not, of the first rank is the earliest expression of the idea involved in the later phrase, a 'classic.' But that term (it may be noted in passing) has nothing to do with lists or classes formed by the Alexandrians. Roman citizens of the first *classis* in respect to property were distinctively called *classici*, while all others were *infra classem*. Hence the term was transferred to literary rank. This metaphor occurs first in the *Noctes Atticae* of Gellius (c. A.D. 150): *classicus adsiduusque (= locuples) scriptor, non proletarius* (XIX. c. 8: cp. VI [VII] c. 13).

203. The Alexandrian study of mythology, which has left its impress on the Alexandrian poetry, was represented in prose by Apollodorus of Athens (c. 140 B.C.), a pupil of Aristarchus. He wrote a work 'On the gods' (*Περὶ θεῶν*) in 24 books, a survey of traditions and opinions concerning them, treated from the Stoic point of view. He was also the author of 'Annals' (*Χρονικά*), in 4 books of iambic trimeters, beginning from the fall of Troy. These works are now known only from fragments. The extant *Βιβλιοθήκη* in 3 books (now supplemented by an epitome found in codex Vat. 950), wrongly ascribed to him in the mss. and by Photius, is a concise handbook of mythology, compiled under the Empire, probably from a lost manual of the first century B.C.

204. The attention bestowed at Alexandria on textual criticism and on exegesis naturally led to the gradual development of systematic grammar. Dionysius Thrax (born 166 B.C.) wrote a

The Alexandrian
κανόνες.

Mythology.

Grammar.

Τέχνη γραμματική which seems to have been the first work of its kind, and was certainly the first to find wide acceptance; it remained in use down to the Renaissance. Apollonius Dyscolus (c. A.D. 130), surnamed ὁ τεχνικός, and designated by Priscian, some three centuries later, as 'grammaticorum princeps,' was the founder of a systematic syntax. Two of his treatises survive, viz., *περὶ συντάξεως τῶν τοῦ λόγου μερῶν*, and *περὶ ἀντωνυμίας* ('on the pronoun'). His son, Aelius Herodianus, was the author of the once celebrated *Καθολικὴ Προσφθία*, or 'General System of Accentuation,' in 20 books,—the chief source used by later Greek writers on the subject. It is lost, and what we know of it is derived from a corrupt and mutilated epitome (made perhaps by the grammarian Arcadius, c. A.D. 200), a few extracts preserved by Porphyry, and the numerous references of the scholiasts. The epitome was adopted by Chandler as the basis of his work on Greek Accentuation.

205. Along with grammar, lexicography was much cultivated. Julius Lexicography. Pollux, a Greek of Naucratis, compiled an *Ὀνομαστικόν* of which the approximate date is fixed by the dedication prefixed to each of the ten books (*Ἰούλιος Πολυδεύκης Κομμώδῳ Καίσαρι χαίρειν*), since the young Commodus received the title of Caesar in A.D. 166, but the higher title of Augustus in 177. The work is of great value as a storehouse of words and technical terms (often illustrated by quotations) relating to various branches of knowledge. Valerius Harpocration (whose date is doubtful between such wide limits as c. A.D. 150 and 350) is the author of *λέξεις τῶν δέκα ῥητόρων*, an alphabetical list of words and proper names used by the orators, with explanations which are often valuable, especially in regard to legal (or other technical) terms. From Moeris (*Μοίρις*), known as the *Ἀττικιστής* (c. A.D. 200?), has come down a list of Attic words and phrases, with their equivalents in other dialects (chiefly in the *κοινή*), entitled *λέξεις Ἀττικῶν καὶ Ἑλλήνων*. Each article is simply a brief entry; e.g. *ἀροῦν Ἀττικοί· ἀροτριᾶν Ἑλλήνες* (i.e. the *κοινή διάλεκτος*). Other noted lexicographers, whose works have perished, were Pamphilus (c. A.D. 50?), and Diogenianus (c. A.D. 130). All this material, and much more of a similar kind, was available for the later compilers of comprehensive dictionaries, such as Hesychius, the author or authors of the *Etymologicum Magnum*, and Suidas.

The study of metre is represented by Hephaestion (c. A.D. 150), whose chief work, *Περὶ μέτρων*, in forty-eight books, is lost. Metre. But we have his own epitome of it, *Ἐγχειρίδιον περὶ μέτρων*, which was thenceforth the standard manual on the subject, and which indeed is of permanent value, not only for the information which it contains, but also for its citations of poets.

206. Geography, on its mathematical side, profited by the progress of Greek science. Eratosthenes (c. 234 B.C.) was the first who approximately measured a geographical degree. Hipparchus (c. 120 B.C.), the astronomer, invented the method of determining position

by latitude and longitude. Ptolemy (Claudius Ptolemaeus, *c.* A.D. 150) was the author of a Γεωγραφικὴ Ὑφήγησις, long the standard text-book on the subject, in which latitude and longitude were used to determine the position of many thousands of places. Meanwhile the literary treatment of geography had been continued in works of which the general type was derived from earlier writers such as Hecataeus. Scylax (*c.* 350 B.C. ?) was the author of a Περίπλους, still extant, describing parts of Europe, Asia and Libya. Scymnus (*c.* 80 B.C.) wrote a Περιήγησις which is lost: the extant poem in nearly a thousand iambic verses which bears that title, and which was formerly ascribed to him, is of unknown origin.

207. A new method and aim distinguish the Γεωγραφικά of Strabo, who lived under Augustus, and in the earlier part of the reign of Tiberius. The reader whom Strabo had in view was the educated Roman, more especially the Roman who might be called upon to bear some part in provincial administration. Such a man ought to know, at least in outline, the physical and political geography of each country, and the principal events in its history. This is the knowledge which Strabo seeks to furnish, while omitting, as a rule, descriptive or local detail of the minuter kind. Of his seventeen books, the first two are introductory, dealing with the principles and science of geography. Eight books are then given to Europe; six to Asia; and one to Egypt and Libya. At the end of book VII, the part which dealt with Macedonia and Thrace is lost; and for that part we have to rely on a meagre epitome of the whole work made probably towards the close of the tenth century. The permanent value of Strabo is in respect to history no less than to geography.

208. Pausanias, a native of the region about Mount Sipylus in Lydia, wrote his Ἑλλάδος περιήγησις in the latter part of the second century. One clue to the date is given by the latest event noticed, viz., the incursion into Greece of the Κοστόβωκοι (*x.* 34, § 5), a Sarmatian tribe, which occurred somewhere between A.D. 166 and 180 (perhaps in 176). The work is in 10 books: I. Ἀττικά, with Megara: II. Κορινθιακά, with Sicyonia, Phliasia and Argolis: III. Λακωνικά: IV. Μεσσηνιακά: V. and VI. Ἡλειακά: VII. Ἀχαιικά: VIII. Ἀρκαδικά: IX. Βοιωτικά: X. Φωκικά. It is a guide-book, combining a record of memorable traditions with a description of notable objects. For the historical part, the writer has consulted a large range of Greek literature, both verse and prose, besides occasionally using inscriptions or other documents. As to the descriptive part, he states in several instances that he has seen the things which he describes; and, generally, he gives it to be understood that his account rests on personal inspection. Nor is there the slightest reason to doubt this. A theory has, indeed, been set up that Pausanias slavishly copied a much earlier 'periegete,' Polemon of Ilium (*c.* 170 B.C.). Hence, it is said, (1) he describes things which, in his own day, no longer existed; and (2) ignores monuments subsequent in date

to Polemon. But the first charge has never been proved; and the second is untrue. For example, Pausanias describes the new Corinth, which dated only from 44 B.C.: he also describes works produced in the reign of Hadrian, as the Olympieion at Athens and its works of art (I. 18. 6—9); and the images dedicated by Herodes Atticus in the temple of Poseidon at the Isthmus (II. 1. 7—9). The fragments of Polemon (Müller III. 109 ff.), so far from supporting the accusation, indicate that Pausanias either did not know the writings of Polemon, or else disregarded and sometimes tacitly controverted him. The extant monuments of Greece are the best proof that Pausanias described Greece as he saw it. Thus his accuracy has been confirmed by excavations made in 1895 at the sanctuary of the *Δέσποινα* at Lycosura in Arcadia. [See J. G. Frazer's *Pausanias*, vol. I. pp. lxxxix ff., and vol. V. p. 622.]

209. Polybius of Megalopolis was born towards the close of the third century B.C. (probably *c.* 210—206), and lived to the age

History.
Polybius.

of eighty-two. The son of Lycortas, one of the leading men of the Achaean League, Polybius was in youth the political disciple of his father's friend and colleague Philopoemen, whose ashes he carried to the grave in 183 B.C. In early manhood he was himself a magistrate of the League. From 167 to 151 he was a political prisoner at Rome, living in the house of Aemilius Paulus, whose two sons, Fabius Maximus Aemilianus and Scipio Aemilianus (Africanus minor), were his pupils and friends. He was present with Scipio Aemilianus at the destruction of Carthage in the spring of 146 B.C. Later in the same spring, he was at Corinth, either during or just after the sack by Mummius. When the Roman province of Achaia had been organized, the Roman commissioners assigned to Polybius (in 145) the duty of visiting the several cities and arranging the local details of the new settlement.

The subject of his *History* (*Ἱστορίαι*, usually called by him *πραγματεία*), as originally planned, was the period from the beginning of the Second Punic War to the conquest of Macedon (219—167 B.C.). But he afterwards enlarged this plan, continuing his narrative to the fall of Carthage and the final subjugation of Greece (146 B.C.). He also prefixed an introductory sketch (books I and II) of the events from 264 (where the Sicilian History of Timaeus ended) to 221 B.C., including the First Punic War (264—241 B.C.) The History was in forty books. Only the first five (going down to 216 B.C.) have been preserved entire: but of the remaining thirty-five we have extracts, made by various Byzantine compilers, and fragments. The ruling idea of the work is the recognition that the power of Rome is irresistible; and that this central, all-subduing power has given unity to the history of the Mediterranean States. His subject is *ἐν ἔργον, ἐν θέαμα* (III. 1).

The period from 220 to 146 B.C. 'corresponds,' he says, 'partly with our own days, and partly with those of our fathers;...some of the events happened before our eyes, and of the rest we heard from those who had

seen them' (IV. 2). Polybius spared no trouble in visiting sites and examining documents; nor did he fail to use earlier writers where they could help. He was a careful student of laws, institutions and customs. His chronology, as Cicero noted (*De off.* III. 32), is exact. Above all, he is a man of large mind, thoughtful and fair. He is not a first-rate writer. He has not the grasp, the piercing insight, or the literary force of Thucydides. But he is a historian of the same class, a man at once of action (both political and military) and of research. Nor can Thucydides himself be placed above Polybius in respect to complete equipment of knowledge, or to those moral qualities which assure the value of narratives and judgments.

210. The history of Rome, or universal history with Rome for its centre, employed a number of learned compilers from the Augustan age onwards. Their idea of scope and scale was taken, not from the example of Herodotus or Thucydides, but from the forty books of Polybius; and their writings have shared, more or less, a like fate. Few copies were in circulation; Byzantine readers had recourse to epitomes or excerpts; and the original works have reached us, for the most part, only in a fragmentary form.

Compilers of
Roman His-
tory.

211. The Βιβλιοθήκη Ἱστορικὴ of Diodorus Siculus (c. 40 B.C.) is a general history of the world, grouped around that of Rome, and carried down to Caesar's conquest of Gaul. It was in forty books, of which we have only the first five (the mythical history of Egypt, Assyria, Aethiopia, and Greece), and books XI—XX (480—302 B.C.), with some fragments. Diodorus was essentially a compiler, without much critical faculty, and he certainly is not a lively writer; but we owe him a debt for the facts which he has preserved.

Diodorus
Siculus.

212. Dionysius of Halicarnassus (c. 25 B.C.)—whose excellence as a literary critic has already been noticed (§ 182)—composed a 'Ρωμαϊκὴ Ἀρχαιολογία in twenty books. This was an 'Early History of Rome' to 264 B.C., meant to form an introduction to Polybius. We have books I—X (complete) and XI (imperfect), going down to 441 B.C.; also excerpts from XII—XX. Polybius had said that Τύχη, in giving empire to Rome, had been 'an honest umpire'; and Dionysius develops this thought by tracing Roman dominion to the inborn abilities and virtues of the race. Moreover, the Romans, he argues, are not 'barbarians,' but of Greek descent. Dionysius was evidently painstaking in research; he did not understand the constitutional history of Rome; but he gives us a great deal of useful information. He is a literary man of alert and graceful mind, with certain ideas which he wishes to work out in a historical form. His style is good; and the fictitious speeches in his history are sometimes excellent of their kind.

Dionysius of
Halicarnas-
sus.

213. Appianus of Alexandria (c. A.D. 140) wrote a general history of Rome ('Ρωμαϊκαὶ Ἱστορίαι) from the earliest times to the accession of Vespasian (A.D. 70), in twenty-four books.

Appian.

Book I, entitled *Βασιλική* (*sc. ἱστορία*), treated of the regal period. The wars of Rome were next narrated as follows, each book (as a rule) taking its title from the country concerned:—II. *Ἰταλική* (Wars in Italy other than the Samnite): III. *Σαννιτική* (Samnite wars): IV. *Κελτική*: V. *Σικελική καὶ νησιωτική*: VI. *Ἰβηρική*: VII. *Ἀννιβαϊκή* (Second Punic War): VIII. *Λιβυκή* (beginning with a general sketch of the Punic Wars): IX. *Μακεδονική*: X. *Ἑλληνική καὶ Ἰωνική*: XI. *Συριακή*: XII. *Μιθραδάτειος*. Nine books (XIII—XXI) then dealt with the civil wars (*Ῥωμαϊκὰ Ἐμφύλια*) from the times of Marius and Sulla to the battle of Actium (31 B.C.). Book XXII (*Ἐκατονταετία*) covered the century from 30 B.C. to 70 A.D.: XXIII (*Ἰλλυρική*) and XXIV (*Ἀράβιος*) comprised the Illyrian and Arabian Wars. We have (1) excerpts and fragments from books I—V and IX: (2) the whole of books VI—VIII; XI; XIII—XVII (the Civil Wars, to 34 B.C.,—the most valuable among the extant parts of the work); and XXIII. Books X, XVIII—XXI, and XXIV are wholly lost. Appian was a compiler pure and simple; he is weak in geography and chronology, but writes a plain, clear style.

214. Dion Cassius (*c.* A.D. 200) wrote a *Ῥωμαϊκὴ ἱστορία* from the

Dion Cassius. foundation of the city to A.D. 229 (the seventh year of Alexander Severus). It was in no less than eighty books.

The first thirty-five of these are now represented only by a considerable body of excerpts and fragments (filling about 98 8vo. pages in Bekker's edition). Books 36—60 are extant in a practically complete state. The last 16 chapters of book 60 however (cc. 29—35) have come down to us only in the abridged form given to them by John Xiphilinus, a Byzantine scholar in the eleventh century. These twenty-five books (36—60) comprise the period from the campaign of Lucullus against Mithradates in 68 B.C. to the death of the Emperor Claudius in A.D. 54. For the series of books from 61 to 80 (inclusive) we have only the epitome of Xiphilinus, occasionally supplemented by excerpts, or fragments of other abridgments. These books cover the period from A.D. 54 to A.D. 222. The distinctive merit of Dion Cassius consists in his familiarity with the details of Roman administration. The son of a senator, he had himself filled the offices of quaestor, aedile, praetor, and consul. He is equally at home, as Niebuhr observed, in constitutional or legal matters and in military tactics. So far as can now be judged, he possesses the merit which he claims (frag. 1. 2) of having used his sources with discrimination and care. His chief model in method and treatment was Polybius; he was also a student of Thucydides; and he seeks, in their spirit, to trace causes and motives. He is a valuable authority, especially for events in or near his own time.

215. Herodian (*c.* A.D. 240) wrote a history of the Emperors from

Herodian. Commodus to Gordian III (A.D. 180—238). Taking the death of Marcus Aurelius (180) as his starting-point, he called his work *Τῆς μετὰ Μάρκον Βασιλείας ἱστορία*, and divided it into eight books, which have come down entire. The period of fifty-eight years comprises fifteen reigns. His narrative is clear and vivid. This history

was made popular in the later times of the Renaissance by Politian's Latin version (1493).

216. Apart from the Greek compilers of Roman history, two remarkable men enriched the historical literature of the Greek language in the Imperial age. Flavius Josephus (c. A.D. 80), a Jew of noble descent, wrote a 'History of the Jewish War' (Περὶ τοῦ Ἰουδαϊκοῦ πολέμου) in twelve books, from the capture of Jerusalem by Antiochus Epiphanes in 170 B.C. to its capture by Titus (at which he was present) in A.D. 70. A statesman and a soldier, Josephus has so far a certain kinship with the classical historians of an earlier time. The Greek into which he translated his work from the Hebrew in which he first composed it is often marked by a certain graphic liveliness (ἐνάργεια): but, in styling him 'the Greek Livy,' St Jerome did less than justice to his solid historical merits. He wrote also an 'Early History of the Jews' (Ἰουδαϊκὴ Ἀρχαιολογία), in twenty books, going down to A.D. 66. His aim here was to do for his nation what Dionysius of Halicarnassus had attempted for Rome.

217. The literary activity of Arrian (c. A.D. 150) was curiously dominated by the idea of a parallel between his own relation to his master in philosophy, the Stoic Epictetus, and that of Xenophon to Socrates. One portion of his works formed a manifold counterpart to the *Memorabilia*. He edited the 'Lectures' (Διατριβαί) of Epictetus (in eight books, of which the first four are extant): compiled his 'Discourses' (Ὀμιλῖαι) in twelve books, now lost; and, besides a Life of the master (also lost), the extant 'Manual' (Ἐγχειρίδιον) or summary of his teaching, which was much read alike by pagans and by Christians. Then at the side of Xenophon's *Anabasis* he placed his own 'Ἀνάβασις Ἀλεξάνδρου', also in seven books, of which we have the whole, except a passage lost at the end of VII. c. 12. Setting out from Philip's death in 336 he goes down to Alexander's in 323. Arrian is a critical historian, who has carefully sifted his documents. He has also the merit of clearness in describing military matters. His extant Ἰνδική (or τὰ Ἰνδικά) forms a kind of appendix to his *Anabasis*. It is a description of parts of India, based, so far as the interior of the country is concerned, on Megasthenes (c. 300 B.C.) and Eratosthenes, while in regard to the coasts he used the Παράπλους of Alexander's admiral Nearchus. The treatise is written in Ionic, like the Ἰνδικά of Ctesias (c. 400 B.C.),—for whose work, however, he had small esteem (*Anab.* v. 4, § 2). As if to complete his claim to be called ὁ νέος Ξενοφών, Arrian wrote a treatise on hunting (Κυνηγητικός), a sort of supplement to that which passes as Xenophon's.

218. Plutarch, who was born at Chaeronea in Boeotia not later than A.D. 50, and probably died soon after 120, is chiefly famous as the author of the Βίοι. In the extant collection there are two elements. (a) A series of Βίοι παράλληλοι. Plutarch narrates the life of an eminent Greek; then the life of an eminent Roman who in some way resembled him; and subjoins a short comparison

Josephus.

Arrian.

Biography.
Plutarch.

(σύγκρισις). There are twenty-two such couples. In one instance, he takes a pair of Greeks (Agis and Cleomenes), and sets them over against a pair of Romans (Tiberius and Gaius Gracchus), adding a collective 'comparison.' There are thus forty-eight Parallel Lives in all. In four instances (Themistocles and Camillus; Pyrrhus and Marius; Alexander and Julius Caesar; Phocion and Cato minor) the σύγκρισις is wanting. (β) There are also four single lives:—Artaxerxes II (Mnemon); Aratus (the founder of the Achaean League); and the emperors Galba and Otho. These were originally independent pieces.

As a biographer, Plutarch may be said to have three principal traits. (1) He sharply distinguishes biography from history. 'I am a writer of lives,' he says, 'not of histories.... A small matter, a saying, or a jest, often brings out character (ἐμφασιν ἤθους ἐποίησε) better than battles... or sieges' (*Alex.* 1). Hence he often passes lightly over events important in themselves, particularly when they have been well told by others. (2) His aim being vivid moral portraiture, the authorities which he consulted were especially such as could supplement the greater historians by supplying personal details. The historical value of the *Lives*, so far as it can now be tested, has been justly estimated by Heeren:—Plutarch generally went to the best sources available; he used them with intelligence and fidelity; and his standard of biographical work was a high one. (3) As he is strong on the ethical side, so is he weak on the political. He seems to have no measure of the difference between the conditions of life in the free Greece of the fifth century B.C. and in the dependent Greece of a later age. Thus the 'liberty of Greece' proclaimed by Flamininus in 196 B.C. rouses in him an enthusiasm (*Flamin.* c. 10 f.) which Trench has justly contrasted with Wordsworth's truer estimate of it, as 'A gift of that which is not to be given.' In the Roman Lives (*e.g.* those of Sulla and Cicero) the lack of political insight is especially apparent.

The ἠθικά (*Moralia*) form a collection of some eighty pieces, many of which are essays on points of conduct, while others relate to questions of history, antiquities, letters, or science. In the miscellaneous and delightful gossip of these pieces Plutarch appears, to use Joubert's phrase, as the Herodotus of ethics. The natural piety of the man, his moral dignity, and his geniality are felt throughout. It is good to know, through him, another aspect of his age than that depicted by Suetonius, Juvenal and Tacitus. As to mere style, Plutarch is one of the very few popular writers who have more to gain than to lose from a good translation; he was too fond of long compound words and involved sentences.

219. Diogenes Laertius (whose date is uncertain, but may perhaps be placed c. A.D. 200—250) wrote a work on the lives and opinions of philosophers, which is quoted by various titles, as Σοφιστῶν Βίοι (Eustathius), Φιλόσοφοι Βίοι (Photius).

The first seven of his ten books contain the philosophers of *Ionía*, beginning with Thales. Under this head he includes the Socratic schools,

which he divides into three groups: (1) Plato and the Academics; (2) Aristotle and the Peripatetics; (3) the Cynics and the Stoics. He then devotes his last three books to the philosophers of *Italy* (and their followers); beginning with Pythagoras and ending with Epicurus. The work is a mere compilation, uncritical, and somewhat careless: the author's main object was to collect entertaining anecdotes. But it is of immense value for the history of philosophy: about forty writers, now lost, are quoted in it.

220. The name Philostratus was borne by a series of 'sophists' who came from the island of Lemnos. I. The first of these, said by Suidas to have lived in Nero's reign, is obscure. The
Philostrati. Some critics ascribe to him the dialogue *Νέρων* which has come down among Lucian's writings. II. Flavius Philostratus (c. A.D. 210), known as 'the Athenian,' was the author of *Βίοι Σοφιστῶν*,—sketches of rhetoricians and orators, as well as of some men who might 'lay claim to philosophy,' from the days of Protagoras to his own. The chief value of the work is for the later history of rhetoric. He also wrote *Τὰ εἰς τὸν Τυανέα Ἀπολλώνιον*, a Life of that wandering Pythagorean and mystic (born c. 4 B.C.), whom many then regarded as a supernatural being. III. A third Philostratus, called 'the Lemnian,' nephew and son-in-law of the second, was 24 years old in Caracalla's reign (A.D. 211—217; *Vit. Sophist.* II. 30). His *Ἡρωικός* is a dialogue on the heroes of the Trojan war, largely indebted to the cyclic and tragic poets, and censorious of Homer, especially for exalting Odysseus at the expense of Palamedes. In his *Γυμναστικός* he exhorts an enervated age to revive athletic contests. But his most popular work was the *Εἰκόνες*. In these he purports to describe a variety of pictures in a portico at Naples. IV. A fourth Philostratus (c. A.D. 300?), the maternal grandson of the third, wrote another set of *Εἰκόνες* (of which only part remains), in avowed imitation of the earlier series, but with inferior grace and spirit. Elegant description, in which language vied with the works of the painter's or sculptor's art, was a literary fashion of the time.

221. Rhetoric had been placed on a new footing by Aristotle, who had laid down principles or general rules, and so constructed an intelligent art (see § 185). Hermagoras of Rhetoric
after Aristotle. Temnos (c. 110 B.C.), whose works are lost, treated the subject in a manner less abstract than Aristotle's, but more scientific than that of the pre-Aristotelian writers, who had dealt mainly with the practical requirements of the law-courts. Hermogenes (c. A.D. 170), building partly on Hermagoras, made a complete digest of rhetoric, which is contained in five extant treatises. He is clear and acute. Among other extant works, once popular, may be mentioned the 'Art of Rhetoric' by Cassius Longinus (c. A.D. 260); the 'Exercises' (*προγυμνάσματα*) of Aphthonius (c. A.D. 315), long a standard text-book, which again came into use at the Renaissance; and the 'Exercises' of Aelius

THEON (c. A.D. 380). The remarkable essay on the sources of 'Sublimity' (περὶ ὑψους)—meaning what we should rather call 'impressiveness in style' generally—is ascribed in the oldest ms. to 'Dionysius [of Halicarnassus] or Longinus,'—showing that the authorship was doubtful. The internal evidence points to a date earlier than that of Longinus; perhaps to the first century A.D.

222. During the first four centuries of the Empire there was an extraordinary demand for rhetorical accomplishment. The arts of panegyric and of adulation played a prominent part in every phase of public life. Forensic speech had an enlarged scope, especially in the provinces. Rhetoric, as the most useful, became the most popular form of Greek culture. The name σοφιστής, which Isocrates had accepted for himself, now became a quasi-professional title. Under Hadrian and the Antonines, the 'sophists' reached a high degree of dignity and influence. Marcus Aurelius established at Athens a school of Philosophy, with four Chairs (θρόνοι),—Platonic, Peripatetic, Stoic, and Epicurean; and, at its side, a school of Rhetoric, with two Chairs,—the Sophistic (in the theory and art of rhetoric), and the Civic (πολιτικός, concerned chiefly with forensic speaking). The 'sophistic' Chair held the superior rank. Similar posts existed in many of the greater cities, and were objects of strenuous ambition.

223. The abundant examples of 'sophistic' literature which have come down to us contain much that is tedious and inane, but also not a little that is interesting and curious. Dion Chrysostomus (c. A.D. 100), who enjoyed the favour of Nerva and Trajan, has left a collection of discourses (λόγοι) which are partly orations, partly essays on philosophical, political, or literary themes. In his best-known piece, the Ῥοδιακός, he censures the custom, adopted in Rhodes, of inscribing ancient statues with new names, and then erecting them as memorials of modern men. Dion's style is easy and pleasant.

Aristeides. Publius Aelius Aristeides (ob. c. A.D. 180) represents the rhetoric of display at the zenith of its glory: in the opinion of his age, and in his own, he was at least the equal of Demosthenes. His most ambitious λόγοι are in praise of cities (e.g. his *Panathenaicus*, on the model of Isocrates), or of deities (as his *Εἰς Δία*). His six *ἱεροὶ λόγοι* relate to incubations in temples of Asclepius.

224. Three noteworthy sophists belong to the fourth century. Libanius of Antioch (born c. A.D. 314) was more than a successful rhetorician. His *Life of Demosthenes*, and his *ὑποθέσεις* to the orator's speeches, have a lasting interest. Among his Letters are some which he wrote to Basil and to John Chrysostom (his pupils), to Athanasius, to Gregory of Nyssa, and to the Emperor Julian. Themistius (c. A.D. 360), a student of Aristotle (on whom he commented), and in style an imitator of

The New
Sophistic.

Dion Chry-
sostomus.

Aristeides.

The fourth-
century
sophists.

Libanius.

Themistius.

Plato, had a great reputation for eloquence, but, unlike most of the sophists, disclaimed the power of extemporary speech. Himerius.
 Himerius, after becoming eminent as a teacher of rhetoric at Athens, was invited by Julian to Antioch in A.D. 362. In his extant *λόγοι*, which are largely 'displays,' he often imitates Aristeides, not without ingenuity and spirit. Gregory of Nazianzus and Basil were among his pupils.

The Emperor Julian (born A.D. 331, died 363) has a link with the 'sophists' through his encomia on Constantius and on Eusebia, his discourses on pagan deities, and other rhetorical compositions. These are, however, less distinctive than his two satirical pieces. The *Καίσαρες ἢ συμπόσιον* is a witty dialogue on his predecessors, among whom Marcus Aurelius fares best. When Julian visited Antioch in 362, the streets resounded with insolent songs, which (as Gibbon says) 'derided the laws, the religion, the personal conduct, and even the *beard* of the emperor.' In his *Ἀντιοχικός ἢ μισοπώγων* he retorts by castigating the manners of that dissolute city. But it is the large collection of his Letters which gives the best and most interesting view of his genius, his character, and his tastes. Julian.

225. The study of rhetoric, by cultivating expression as an art, encouraged those lighter forms of literature which depend mainly on style. Lucian, a Syrian of Samosata (c. A.D. 120—Lucian. 200), began life as an itinerant sophist, visiting Ionia, Greece Proper, Italy, and Gaul. Settling at Athens when he was about forty, he gave himself to the literary work which made his fame; in later years he was an official of a law-court in Egypt. A sceptic and a wit, placed in an age of shams, Lucian has at least a negative zeal for truth: he does not believe that man can know, but he is a vigorous enemy of pretence in religion, philosophy, and literature. The *Δίς κατηγορούμενος* intimates his distinctive claim; he is the founder of *satiric* dialogue. Rhetoric there upbraids the 'Syrian' with forsaking her, his first love, for 'the bearded Dialogus'; while Dialogus complains that the Syrian has dragged him from his philosophical heaven to earth, and given him a comic instead of a tragic mask. Lucian's dialogues blend an irony, which he had studied in Plato, with an Aristophanic mirth and fancy. His satire ranges over the whole life of his time; but among his more conspicuous butts are the Olympian deities (as in *Ζεὺς τραγῳδός*, *Θεῶν διάλογοι*, etc.), the philosophers (as in *Ἐρμώτιμος*, *Βίων πρᾶσις*, *Ἀλιεύς*), and the pedantic stylists (*Δεξιφάνης*, *Σολουκιστής*). In thought, he is of no school, but chiefly admires Epicurus, who to him, as to Lucretius, is the great emancipator from superstition. Lucian makes us feel, not (as Aristophanes often does) that he is modern, but rather that he is a detached observer of the ancients: this is due to his mental separateness from his time, and to a certain tone which suggests that he wrote for the few, or to please himself only; here he sometimes resembles Swift. He has furnished some prototypes of later

work (e.g. the Ἰστορία, relatively to 'Gulliver,' and like books; the Νεκρικοὶ διάλογοι, to Landor's 'Imaginary Conversations'). As to his purely artificial Attic Greek, it is easy to find blemishes in the grammar; but as a whole, in general texture and in spirit, it is the most remarkable and the best-sustained *tour de force* ever achieved,—not to say by a foreigner (καὶ ταῦτα βάρβαρος αὐτὸς εἶναι δοκῶν, *Bis Accus.* § 34),—but by any post-classical writer of the language.

226. The composition of fictitious letters (such as the 'Epistles of Phalaris') was a favourite exercise. From Alciphron (c. A.D. Letters. 200—220?) we have three books of such letters, supposed to pass between Athenians of an earlier time; they are little sketches of common life, drawn largely from Comedy. The imitative Attic dialect shows in some traits a study of Lucian.

227. The stores of literature in the greater libraries invited discursive readers to compile extracts illustrative of their favourite Miscellanies. subjects. Athenaeus, of Naucratis in Egypt, wrote at the end of the second or early in the third century A.D. The Athenaeus. date must be subsequent to the death of the Emperor Commodus in 193 (p. 537 F). But the Ulpian whose peaceful death is noticed at p. 686 C cannot be the jurist, who was murdered by the soldiery in 228. Athenaeus has thrown his collections into the form of a conversation among twenty-nine erudite guests who meet at dinner on several successive days. The title of this work (in fifteen books), *Deipnosophistae*, would more naturally mean 'connoisseurs in dining,' but is intended to signify 'learned men at dinner.' The talk rambles over a wide field,—the pleasures of the table, and everything connected with them,—literature, music, natural history, medicine, grammar, the usages of public and social life. The compilation is a mine of antiquarian lore; in particular, it is a rich source for fragments of Greek poetry (especially Comedy). Quoting upwards of five hundred authors who would otherwise be unknown, Athenaeus gives us a glimpse into the wealth of the Alexandrian Library which he used.

228. Claudius Aelianus (c. A.D. 220) has left a large budget of anecdotes on various subjects (*Ποικίλη ἱστορία*), in fourteen books; and Aelian. a mass of notes or stories about the characteristics of animals and a mass of notes or stories about the characteristics of animals Polyaeus. (*Περὶ ζῴων ιδιότητος*). Polyaeus, a Macedonian (c. 170 A.D.), is the author of *Στρατηγήματα*, in eight books, a series of stories describing the stratagems of famous men (and of some women), chiefly in war, but partly also in civil affairs. He writes well, and the work is of considerable interest for history and biography.

229. Stobaeus (John of Stobi in Macedonia) is a compiler to whom we owe no small debt. Two works (parts of one plan) bear Stobaeus. his name: (1) Ἐκλογαὶ φυσικαὶ διαλεκτικαὶ καὶ ἠθικαί,—extracts from prose-writers in several branches of philosophy; and (2) Ἀνθολόγιον,—a collection of extracts both in prose and in verse, arranged

under topics. Many precious fragments, especially of poetry, are known through him alone. As he quotes the Neoplatonist Hierocles (*Ecl. Phys.* c. 7), who wrote in the latter part of the fifth century, he may be referred to the end of that century, or to the earlier part of the sixth.

230. Galen (Claudius Galenus) was born at Pergamum in A.D. 130, and is said to have survived the accession of Caracalla (211). He was not merely a great physician, but a man learned in all the philosophy and science of his age. One of his distinctive aims (as seen especially in his treatise on the 'Opinions of Hippocrates and of Plato') was to correlate medicine with psychology. 'The best physician,' he held, 'is also a philosopher.' The compass of his writings was very large. He seems to have written at least five hundred treatises, of which more than eighty (excluding spurious or doubtful pieces) are extant. His commentaries on Hippocrates (the founder of Greek medicine, *flor. c.* 410 B.C.) have been invaluable to all later students.

Medicine
and Philo-
sophy.

Galen.

231. Sextus Empiricus (*c.* A.D. 220?) was a physician,—his surname denoting that he belonged to the sect of physicians called *ἐμπειρικοί*, who insisted on practical experience as the paramount guide in medicine. Two of his works are extant.

Sextus
Empiricus.

(1) In one he gives 'outlines' of the Sceptic philosophy of Pyrrhon (*c.* 320 B.C.): *Πυρρώνειαι ὑποτυπώσεις ἢ Σκεπτικὰ ὑπομνήματα*. (2) The other work is a refutation, in 11 books, of all non-sceptic teachers, who are collectively called *μαθηματικοί*, as representing various positive *μαθήματα* (grammar, rhetoric, geometry, arithmetic, astrology, music; logic, physical philosophy, ethics). The title is, *Πρὸς τοὺς μαθηματικοὺς ἀντιρρητικοί*. Sextus is valuable as an authority on the Sceptics, and also for the light incidentally thrown on other systems or disciplines.

232. For the rise and progress of Neoplatonism, and a notice of its chief exponents in the third and fourth centuries (Plotinus and Porphyry), the reader may be referred to the section on Greek Philosophy (§ 277). Stoicism, the other school of thought which was mainly influential in this period, has as its chief representatives Epictetus (*c.* A.D. 110) and the Emperor Marcus Aurelius Antoninus (A.D. 131—180). How the Stoic teaching of Epictetus was recorded by Arrian, has already been mentioned (§ 217). The *Meditations* (*Τὰ πρὸς ἑαυτόν*) of Marcus Aurelius were written, amidst the labours of court or camp, in a private journal, and were first published in 1550 from a MS. now lost. His chosen master is Epictetus, whom he follows in fixing his attention upon practical ethics. The point of view is, throughout, that of the station which defined his sphere of duty,—the Emperor's. This 'most human of all books' (as Renan called it) is a complete picture of the man's inner life. Remembering the character of the age in which Marcus lived,—remembering also the nature of the trials, public and domestic, which he endured,—we shall not think Matthew Arnold's estimate of him

Marcus Au-
relius.

exaggerated: 'he is one of those consoling and hope-inspiring marks which stand for ever to remind our weak and easily discouraged race how high human goodness and perseverance have once been carried, and may be carried again.'

233. We have now traced the development of Greek prose literature from the Alexandrian age down to the period of its decline. The more prominent works in each of the principal departments have been indicated. But, before concluding this sketch, a brief notice

The Greek
romance-
writers.

is due to a form of composition, slight indeed in its early essays, and even actually a symptom of decadence, yet of much interest for literary history, as being the prototype of

the novel. The Greek writers of prose romance in the Imperial age are called *ἐρωτικοί*, because the romance was uniformly the story of a hero and a heroine, the chief motive being love, and the next, ad-

Literary
pedigree of the
Greek novel.

venture. The oldest Greek examples of such stories were supplied by some lyric poems, now lost, of Stesichorus (see § 151). In Greek prose the earliest love-story is that

of Abradates and Pantheia in Xenophon's *Cyropaedia*. The Greek writers of romance under the Empire took much of their scenery, sentiment, and imagery from the pastoral poets and love-elegists, Greek or Latin: in plot and situations they gave free rein to their fancy, unchecked by regard for probability. Parthenius of Nicaea (c. 30 B.C.) compiled a little treatise (extant in an epitome) *Περὶ ἐρωτικῶν παθημάτων*,—thirty-six short love-stories, all tragic, dedicated to Cornelius Gallus, and intended as material for elegiac poetry.

234. Photius, writing in the ninth century, has preserved (*cod.* 94 and 166) outlines of two compositions which were, no doubt,

The first
recorded
novelists.

among the earliest specimens of the Greek prose romance. Iamblichus (c. A.D. 110),—not to be confused with the Neoplatonist,—was the author of a love-story called *Βαβυ-*

λωνιακά, which Photius describes as a *δραματικόν*, i.e. a tale of action, with dialogue. Antonius Diogenes (of uncertain date, but probably earlier than A.D. 300) wrote 'The marvels beyond Thule' (*Τὰ ὑπὲρ Θούλην ἄπιστα*),—in which Deinias met the heroine, Dercyllis, in Thule, and shared with her many wondrous adventures.

235. The extant representatives of the pre-Byzantine romance are five in number. (1) Xenophon of Ephesus (probably not

Xenophon of
Ephesus.
Heliodorus.

later than A.D. 250) is the author of *Τὰ κατὰ Ἀνθείαν καὶ Ἀβροκόμην*,—the scene being laid at his native city.

(2) Heliodorus (c. A.D. 275) is the author of *Αἰθιοπικά*,—the adventures of Charicleia, a priestess of Delphi, and the Thessalian Theagenes, with whom she flies to Egypt, and to whom she is finally married in Aethiopia. Though inferior in poetic fancy to Longus, Heliodorus is on

the whole the best of these writers. (3) Under the name of Longus.

the whole the best of these writers. (3) Under the name of Longus, we have *Τὰ κατὰ Δάφνιν καὶ Χλόην*,—a pastoral

romance of much grace and beauty; the scene is in Lesbos. Nothing is known of the writer, but on literary grounds it may be conjectured that he lived before A.D. 300. (4) Achilles Tatius, who sometimes imitates Heliodorus, and lived not much later than A.D. 300, wrote *Τὰ κατὰ Δευκίππην καὶ Κλειτοφῶντα*. In tone and taste he is inferior to the three preceding authors. (5) A similar remark applies to 'Chariton of Aphrodisias' in Caria,—probably a name assumed by a writer of the fifth century. The scene of his story, *Τὰ κατὰ Χαυρέαν καὶ Καλλιρρόην*, is laid at Syracuse, towards the end of the fifth century B.C.,—the heroine being the daughter of the Syracusan statesman, Hermocrates.

Achilles
Tatius.
Chariton.

236. At the period when feeling and fancy which had once inspired drama, and then pastoral or elegiac poetry, thus found an enfeebled utterance in prose romance, the life of Greek literature was rapidly waning. During the fourth and fifth centuries that process was hastened by two principal causes. The divergence of colloquial from literary Greek was becoming more marked. The estrangement of Christians from those Hellenic writings which they associated with paganism was also progressive; though, even then, not a few of their own greatest teachers were among the foremost masters of Greek style and eloquence. In A.D. 529 the edict of Justinian closed the schools of heathen philosophy. A hundred years later the stream of Greek literature, which for some fifteen centuries had been practically continuous, might be said to have ceased. Hellenism gave place to Byzantinism. But the work of that creative mind, first revealed in the *Iliad*, which had moulded the great monuments of Hellenic thought and imagination, was to remain as a permanent inheritance of mankind. After a long age of partial obscurity or oblivion, the intellectual and spiritual forces which ancient Hellas had transmitted to Rome were revived in Europe at the Renaissance. By helping humanity to find itself again, and by diffusing ideas which are still fruitful in every field of knowledge, those forces determined the transition from the medieval to the modern world.

Conclusion.

I. *Histories of Greek Literature*.—K. O. Müller (vol. I), continued by J. W. Donaldson. 1858.—W. Mure, 5 vols. (I and II, Epic poetry: III, Lyric and Elegiac: IV and V, Prose, to Xenophon.) 1860.—G. Bernhardt, *Grundriss d. gr. Litteratur*. (Poetry.) New ed. by Volkmann, vol. I. 1892.—Th. Bergk, *Griech. Litteraturgeschichte*. Ed. by Hinrichs and Peppmüller, 4 vols. 1872-94.—R. Nicolai, *Griech. Litteraturgeschichte*. 3 vols. 1878.—W. Christ (in Iwan von Müller's series of handbooks), *Gesch. d. Griech. Litteratur*. To the age of Justinian. 5th ed. 1908-12.—U. von Wilamowitz-Möllendorff, *Die griechische Literatur des Altertums in Kultur der Gegenwart*, I. 8. 3rd ed. 1912.—A. and M. Croiset, *Histoire de la littérature grecque*. To the seventh century A.D. 5 vols. 1887-99.—*Shorter Histories*. A. and M. Croiset, *Manuel d'histoire de la littérature grecque*. 1900. (English trans. published by Macmillan & Co. 1904.)—F. B. Jevons. (To the death of Demosthenes.) 3rd ed. 1889.—Gilbert Murray. 1897.—Mahaffy. 3rd ed. 1890 f.

Bibliography.

II. *Works illustrating special departments or periods.* This list is limited to a small number of books, such as are likely to be found useful by students.—J. A. Symonds, *Studies of the Greek Poets*. 2 vols. 1883.—R. C. Jebb, *Growth and influence of classical Greek Poetry*. 1893.—S. H. Butcher, *Some aspects of the Greek genius*. 1894. *Harvard Lectures on Greek Subjects*. 1904.—W. R. Hardie, *Lectures on Classical Subjects*. 1903.—R. C. Jebb, *Introduction to Homer*. 6th ed. 1898.—W. Leaf, *Companion to the Iliad*. 1892.—R. Volkmann, *Geschichte und Kritik der Wolfschen Prolegomena zu Homer*. 1874.—G. Finsler, *Die Homerkritik*, pp. 341-443 of *Homer*. 2nd ed. 1913.—H. Flach, *Geschichte d. gr. Lyrik*. 1883.—G. S. Farnell, *Greek Lyric Poetry*. 1891.—J. W. Mackail, *Select Epigrams from the Greek Anthology*. 2nd ed. 1906.—A. W. Schlegel, *Lectures on dramatic art and literature*. E. T. 1861.—R. G. Moulton, *The ancient Classical Drama*. 1890.—L. Campbell, *A Guide to Greek Tragedy for English readers*. 1891.—*The Student's Manual of Greek Tragedy*, ed. A. W. Verrall. 1891.—J. T. Sheppard, *Greek Tragedy*. 1911.—A. Couat, *Aristophane et l'ancienne Comédie grecque*. 3rd ed. 1902.—J. Denis, *La Comédie grecque*. 2 vols. 1887.—*Hellenica*, ed. E. Abbott: including essays on Aeschylus, Sophocles, Thucydides (the speeches), Xenophon, Polybius, etc. 1883.—R. W. Macan, *Introduction to ed. of Herodotus IV, V, VI (vol. I, pp. i-cxviii), 1895, and VII, VIII, IX (vol. I, pp. i-xcvii), 1908.*—J. Classen, *Einleitung to Thucydides I*, pp. xi-lxxxiv. 4th ed. 1897.—W. H. Forbes, *Introduction to ed. of Thuc. I (pp. i-cxxxii)*. 1895.—H. G. Dakyns, *Translation of Xenophon*, with a Life of the historian, Introductions, and notes. 3 vols. 1890-97.—E. S. Shuckburgh, *Translation of Polybius*, with Introduction and notes. 1889.—R. Volkmann, *Die Rhetorik d. Griechen und Römer*, 2nd ed. 1874, and in Iwan von Müller's series, vol. II, pp. 455-489, 1885.—F. Blass, *Die Attische Beredsamkeit*. 3 parts in 4 vols. New ed. 1887-98.—R. C. Jebb, *Attic Orators from Antiphon to Isaeus*. 2nd ed. 1893.—W. Rhys Roberts, *Longinus on the Sublime*, 1899; *Dionysius of Halicarnassus, the three Literary Letters*, 1901; *Demetrius on Style*, 1902.—B. Jowett, *The Dialogues of Plato translated*, with Analyses and Introductions. 3rd ed. in 5 vols. 1892.—*Aristotle's Rhetoric*, Introduction by E. M. Cope, 1867; *Text and Commentary* by E. M. Cope (ed. by J. E. Sandys), 1877; *Translation* by R. C. Jebb (ed. by J. E. Sandys), 1909.—S. H. Butcher, *Aristotle's Theory of Poetry and Fine Art*, with a critical text and translation of the Poetics. 4th ed. 1907.—I. Bywater, *Aristotle on the Art of Poetry*, a revised text with critical introduction, translation, and commentary. 1909.—A. Couat, *Poésie alexandrine sous les trois premiers Ptolémées*. 1870.—F. Susemihl, *Die alexandrinische Litteratur*. 2 vols. 1891-92.—E. Rohde, *Der griechische Roman und seine Vorläufer*. 1876.

Further bibliographical details may be found in Paul Masqueray, *Bibliographie pratique de la Littérature grecque*, 1914.

III. *Texts of newly discovered fragments of Greek poets.* Archilochus, Alcaeus, Sappho, Corinna, Pindar in *Supplementum Lyricum*, ed. Diehl (Bonn), 1908.—Pindar in Schröder's 2nd ed. 1914, and in J. E. Sandys' text and trans. 1915.—Sophocles and Euripides in *Tragicorum Graecorum Fragmenta nuper reperta*, ed. A. S. Hunt (Oxford), 1912.—Timotheus, *Persae*, ed. Wilamowitz (Berlin), 1903.—Menander, four plays, ed. Van Leeuwen (Leiden), six plays, ed. C. Robert (Halle), 1908.—Callimachus (including his *Hecale*), ed. Wilamowitz (Berlin), 1897.

III. 2. PHILOSOPHY.

A. PRESOCRATICS.

237. At a time when Central Greece had not yet won itself the leisure necessary for intellectual development, *philosophy*, the study of first causes or principles, was already cultivated in the colonies of the East and the West. As early as 600 B.C. the Greeks of Ionia asked themselves 'What is this world in which we live?' and as early as 500 the Greeks of Italy and Sicily echoed the question: but it was not till about 450 that the mother-cities, now prosperous at home and abroad, began to interest themselves in speculative inquiry. Thenceforward, until A.D. 529, when the schools were closed by Justinian, philosophy found a congenial home at Athens. Early in the sixth century B.C. certain legislators, rulers, and statesmen—Thales, Solon, Periander, Cleobulus, Cheilon, Bias, Pittacus—were styled in recognition The Ionians. of their practical ability the *seven wise men* (σοφοί). One of them, **Thales** of Miletus (624—546), was celebrated also for his mathematical attainments, as well as for a theory of the material cause of the universe. On the strength of this physical speculation he was known to after ages as a *philosopher* (φιλόσοφος), that is to say, 'a lover of knowledge for its own sake.' Assuming that the various sorts of matter are modifications of a single increate and imperishable element, but making no attempt to explain why and how the single element variously modifies itself, he affirmed that *all things are water*. Next, **Anaximander** of Miletus (611—547), accepting Thales' assumption, took for his principle (ἀρχή) the *indefinite* (ἄπειρον), that is to say, a material something, which, not being any one of the four elements commonly recognized, was intermediate between earth and water on the one hand and air and fire on the other. From this *intermediate* (μεταξύ τι), which he may have conceived as mist or cloud, he supposed the four so-called elements to develop themselves (ἐκκρίνεσθαι), and into it he supposed them to return. A generation later, **Anaximenes** of Miletus, following closely in the steps of Anaximander, chose for his principle *air*, whence, he added, development takes place by *thinning* (μάνωσις, ἀραίωσις) and *thickening* (πύκνωσις). The Ionian succession ended about 500 with **Heracleitus** of Ephesus, whose teaching is summed up in the propositions, (1) *fire is principle*, (2) *all things are in flux* (πάντα ῥεῖ). Of these propositions, the former—the declaration that all the sorts of matter are stages in the combustion of elemental fire—connected him with his predecessors, while the latter—the

assertion that the modification of the principle is not occasional but perpetual—marked a new departure and carried an important corollary. For Heraclitus recognized that there can be no knowledge of that which is in flux, and his disciples were not slow to draw the sceptical consequence. Thus, whereas hitherto men had inquired ‘What is Being?’ henceforward they found themselves constrained to ask also ‘What is

Ionian
henism.

Knowledge?’ In short, the Ionian henists of the sixth century, postulating a single material cause, took severally for their respective elements, Thales, water modifying itself;

Anaximander, cloud or mist modifying itself in two directions; Anaximenes, air modifying itself in two directions by thinning and thickening; Heraclitus, fire modifying itself perpetually in a recurrent cycle.

238. Meanwhile, after Anaximenes, but before Heraclitus, two Eastern Greeks who about 530 settled in Italy, not being themselves in the strict sense of the term philosophers, were nevertheless preparing the way for new philosophical developments. One of them, **Pythagoras**, originally of Samos, afterwards of Croton, a mathematician and a musician, an educator and a social reformer, founded a sect or order, which, when it ceased to be a political force, diverged into philosophy and propounded a fanciful theory of *numbers* immanent in things. The other, **Xenophanes**, originally of Colophon, afterwards of Elea, the reputed founder of Eleaticism, in his rhapsodical crusade against the anthropomorphic and anthropopathic polytheism of his contemporaries, gave currency to the antithesis of the *One* and the *Many*, and in his moralizings upon the vanity of things emphasized the distinction between *Knowledge* and *Opinion*. A new era

The Eleatics.

began with **Parmenides** of Elea, the father not only of the philosophy of the fifth century, but also of its science and of its scepticism. This great thinker, a later contemporary of Heraclitus, embodied his teaching in a poem called *Nature*. Noting the inconsistency of the Ionians, who to their material principle, ex hypothesi universal, ascribed the specific characteristics of water, mist, air, fire, he first affirms, in the epigrammatic formula *the ent (ὄν) is, the nonent (μὴ ὄν) is not*, the distinction which they had imperfectly apprehended between the One which is and the Many which become and are not. Then under the heads of *Truth* and *Opinion* he deals separately with ent and nonent. In *Truth* he ascertains, by the exclusion of variety and change, that the ent, the only object of knowledge, is increate and imperishable; whole, sole, immovable, determinate; neither past, nor future, but ever present; a homogeneous all, one and continuous, like to a well-rounded and evenly-balanced sphere. These propositions, the results of thought, are the objects of knowledge. In *Opinion*—which, since variety and change are nonent and cannot be known, has no pretension to certainty—he rests a cosmological theory upon the assumption of a duality of elements, *light* or *fire* and *dark* or *earth*, of which phenomenal things consist, and from which they derive their characteristics. In a word,

Xenophanes' antitheses, One and Many, Knowledge and Opinion, enabled Parmenides to combine in his strikingly original system the metaphysical or philosophical henism of the Ionians and the physical or scientific dualism of certain Pythagoreans.

The philosophy and the science which Parmenides had joined together were sundered by his immediate successors. On the one part, his pupil **Zeno** of Elea, neglecting or abandoning the theory of the Many, gave himself to the controversial defence of the theory of the One. Of the arguments which he employed to disprove the existence of plurality, the most famous are certain paradoxes of space, time, and number. But his paradox of predication, cited in Plato's *Parmenides*, had weightier consequences, inasmuch as its premiss, 'unlike things cannot be like, nor like things unlike'—the precursor of Antisthenes' dogma, 'no predication which is not identical is legitimate'—raised the question 'What is Predication?' Zeno was not a great logician, but he must have credit for his recognition of the need of a logic, as well as for his invention of dialectical argument. Eleaticism proper, the theory of the existent One, ended with **Melissus** of Samos, who translated Parmenides' poem into prose.

239. On the other part, **Empedocles** of Agrigentum, **Anaxagoras** of Clazomenae, and **Leucippus** of Abdera, all of them contemporaries of Zeno, rejecting the theory of the One, The Physi-
cists. devoted themselves to the study of the Many, and devised cosmogonies and cosmologies having for their basis the assumption that so-called generation and destruction of things are in truth the commixture and the dissolution of a plurality of elements. First, **Empedocles** (495—435), postulating four *roots* (*διζώματα*) or material causes, *fire*, *air*, *water*, and *earth*, supposed the universe to be governed by two moving causes, alternately predominant, namely, *love* or attraction and *hate* or repulsion. Love, when it ousts hate, produces a complete aggregation of the interspersed elements in a unity called the *sphere* (*σφαῖρος*). Hate, when it ousts love, separates the four elements the one from the other. In the intervals between these crises, love and hate by their joint action give rise to cosmic or particular existences. At the beginning of our own epoch, when hate returned and brought about the disruption of the sphere, first, air, fire, earth, and water, discovered themselves; then trees; then animate organisms,—limbs, limbs conjoined, animals, and, finally, animals having the power of reproduction. Bone, flesh, muscle, and blood,—which last is the seat of intelligence,—consist severally of elements united in determinate proportions. The subject of sensation, receiving into appropriate pores films or effluvia given off by the object, apprehends the elements of the object by means of the corresponding elements contained in itself: for like is known by like. The evidence of the senses cannot be implicitly trusted. Aristotle's complaints, to the effect that Empedocles does not explain the relation of his causes, moving

and material, to one another and to the universe which we know, would seem to be just: but the modern reader notes with interest Empedocles' rejection of the law of the survival of the fit, and with surprise Aristotle's rejection of it. Secondly, **Anaxagoras** (500—428), who, though born a few years before Empedocles, was later in his intellectual activity, took for his elements an infinity of *seeds* (*σπέρματα*), which, while they have determinate characters, are by reason of their smallness severally imperceptible. Hence in the beginning, when they were indiscriminately mixed, the *totality of seeds* (*πανσπερμία*) was wholly destitute of perceptible form or quality. The *mind* (*νοῦς*), the rarest and finest of things, external to the formless chaos and independent of it, communicated to it a motion of *rotation* (*περιχώρησις*). Thereupon like seeds came together in appropriate regions and produced perceptible aggregates: and so the orderly universe began. Bone, flesh, marrow, and generally what we know as homogeneous bodies, are homoeomerous concretions of the corresponding seeds: or, more exactly, they are concretions in which the corresponding seeds predominate; for in each thing, together with the predominant seeds from which it derives its present character, there are also seeds of all other kinds, isolated and therefore unperceived, which, when they severally come together, bring about appropriate changes. Fire, air, water, and earth, are not elemental. That is to say, there are no *seeds* corresponding to them; they derive their natures from the joint predominance of a plurality of kinds. Sense is fallible. Plato and Aristotle agree both in commending Anaxagoras for making his moving cause intelligent, and in censuring him for limiting its activity to the communication of an initial impulse. The chaos of seeds and the creative mind of Anaxagoras are plainly equivalent to the sphere and the fate of Empedocles, and were probably derived from them. Thirdly, **Leucippus**, a contemporary of Anaxagoras and Empedocles, propounded a thorough-going atomism, which his successor **Democritus** (460—351) developed and enforced. The elements of things are, said the Atomists, the *full* (*πλήρες, στερεόν*) and the *empty* (*κενόν, μανόν*), the full being an infinity of immutable *atoms* (*ἄτομα, ἄτομοι*), differing from one another in *shape* (as A from N), in *order* (as AN from NA), and in *inclination* (as N from Z), while the empty is the vacuum or space without which motion would be impossible. Falling through space with velocities proportioned to their size, the atoms overtake and impinge upon one another. A *vortex* (*δίνη*), resembling the rotation of Anaxagoras, ensues, and in the course of it like atoms congregate in perceptible groups. In this way worlds, infinitely numerous, of which our world is one, come into being. The magnitude, the weight, and the resistance of bodies, depend upon the atoms and the spaces of which they are composed. Sensations, such as hot and cold, sweet and bitter, are affections which the object produces in the subject. Soul or mind, like fire, consists of atoms which, being fine and spherical, are conspicuously mobile. There are two sorts of knowledge: *genuine* knowledge which has for its objects the atoms and the void,

and *dark* knowledge which has for its objects the impressions of sense. Thus whereas Anaxagoras attributed to his seeds all the qualities which we find in things, Democritus tried to express the qualities of things in terms of atom and void: and whereas Anaxagoras ascribed the creative impulse to an external mind, Democritus conceived the universe as the necessary and accidental (that is to say, undesigned) result of the descent of atoms through space. The coevals of Democritus hardly appreciated his painstaking attempt to devise a cosmology, and to his later contemporary Plato his unqualified materialism was nothing less than odious. Nevertheless at a later period Epicurus was glad to borrow his science, and to graft it upon his own unscientific, unphilosophical, system.

240. These one-sided developments of Parmenidean Eleaticism—that is to say, the doctrine of Zeno, which recognized a One without a Many, and the doctrines of Empedocles, Anaxagoras, and Leucippus, which recognized a Many without a One—led the way to sceptical conclusions which were formulated and maintained by Gorgias of Leontini (483—376), and Protagoras of Abdera (481—411). ‘Nothing is, nothing can be known, nothing can be expressed in speech,’ said Gorgias: so he turned to the study and the teaching of rhetoric. ‘Man is the measure of all things, of what is, that it is, and of what is not, that it is not,’ said Protagoras: so he turned to the study and the teaching of literature. Thus philosophy fell into disrepute: and, under the guidance of certain professional teachers, commonly called **sophists**, who, frankly abandoning the pursuit of truth as elusory, claimed to communicate culture, accomplishments, and aptitude for affairs, the intellectual energies of Greece took the direction of Humanism. Sophistry flourished for about a hundred years, from the middle of the fifth century to the middle of the fourth. Two lines of descent, and five phases or varieties may be discriminated. In the one line, (1) the sophistry of literature, begun by Protagoras who came to Central Greece about 450, and continued by Prodicus of Ceos and Evenus of Paros, gave rise to (2) polymathic sophistry, professed by Hippias of Elis, which sought to popularize literature, learning, science, and art, and from this again sprang (3) the eristic sophistry of Euthydemus and Dionysodorus, which claimed to teach an art of disputation applicable to all subjects. In the other line, (4) the sophistry of forensic rhetoric, beginning at Syracuse with Tisias and Corax about 467, and brought to Central Greece by Gorgias in 427, was succeeded in the early years of the fourth century by (5) the sophistry of political rhetoric, which, ably represented by Isocrates (436—338), was in possession of the field when Plato in the character of an educational reformer returned to Athens and established the Academy. The sophists had no doctrines in common: nevertheless they agreed in disliking philosophy. They were not conspirators against morality: but the ethical principles which some of them taught, if they did not fall lower than the low contemporary standard, did not rise above it; and the

Philosophy
superseded by
Humanism.

Sophistry.

exclusive study of style and method, and the persistent practice of orator and debate, may well have encouraged both in teacher and in learner dangerous disregard of truth.

B. SOCRATES AND THE MINOR SOCRATICS¹.

241. As Gorgias and Protagoras, despairing of philosophy, had betaken themselves, the one to rhetoric, the other to literature, so Socrates under like circumstances devoted himself to the study of conduct. Born at Athens in 469, he was bred as sculptor. He served with distinction at Potidaea in 432—429, at Delium in 424, and at Amphipolis in 422. He gave conspicuous proof of independence and resolution in his refusal to bend before the demos in 404 and in his contemptuous defiance of the tyrants in 404. A representative of the 'moderate' party in politics, he was brought to trial and put to death in 399 by the restored democrats, who disliked, not so much his supposed heterodoxy in religion and education, as rather his reactionary politics, which at this juncture were all the more dangerous because they were not extreme. Socrates' outward appearance, which was grotesque and even repulsive contrasted strangely with the moral virtues and the intellectual gifts which warranted Plato in pronouncing him 'of all whom he had known the best, the wisest, and the justest.' His perfect self-control did not make him self-righteous, nor his amazing powers of endurance, censorious. He was scrupulous in his performance of duties to his God, to his country, to his fellow-men. He was a genial companion and a faithful friend. Naturally observant, acute, and thoughtful, he had acquired a remarkable tact in handling questions of practical morality, and in the course of a life-long war against vagueness of thought and laxity of speech, had made himself a singularly apt and ready reasoner. In the humorous affectation of dulness which his contemporaries knew as 'Socrates' accustomed irony,' there was nothing ill-natured, nothing insincere. He was truthful in deed, in word, and in thought. In pursuance of what he accounted his divine commission, Socrates spent his days in the market-place, the streets, the gymnasia, cross-examining all comers about their affairs, their occupations, their principles of action, and convincing them of an ignorance which mistook itself for knowledge. For himself, he was, perhaps, as the oracle had said, wiser than others, but only in so far as, whilst they, being ignorant, supposed themselves to know, he, being ignorant, was aware of his ignorance. Of his hearers many, regarding his curious questionings with indifference or irritation, shunned Socrates as a bore or worse. Others, seeing in the society of so acute a disputant a good preparation for public life, attached themselves to him temporarily as they might have attached them-

¹ This section is based upon the writer's article on the same subject in the ninth edition of the *Encyclopædia Britannica*, vol. xxii.

selves to any ordinary sophist. To others he was a wise counsellor and a perfect ensample of civic and domestic virtue. Finally there was a little knot of intimates who, having something of his enthusiasm, entered more deeply into his principles, and in due course transmitted them to the next generation. Yet even those who belonged to this inner circle were united, not by any common doctrine, but by a common admiration for their master's character and intellect.

242. Socrates' theory of education had for its basis a reasoned scepticism. Whereas Protagoras, holding that 'man is the measure of all things' and accordingly despairing of philosophy, held himself notwithstanding free to dogmatize and instruct in another field, Socrates, more consistent in agnosticism, not only condemned the search for causes as a futile attempt to transcend the limits of human intelligence, but also plainly affirmed that no man has authority or power to impose any opinion upon another. Nevertheless, opinions are, he thought, good or bad, according as, when translated into act, they are more or less serviceable: and it is possible by systematic questioning to lead a respondent to substitute a better opinion for a worse, just as a physician by appropriate remedies may enable his patient to substitute a healthy sense of taste for a morbid one. *Dialectic*, 'question and answer,' was then the only method open to him in the performance of his divinely-appointed duty as a physician of souls. In the application of the dialectical method two processes are distinguishable, the destructive process by which the worse opinion was eradicated, and the constructive process by which the better opinion was induced. In the former, the so-called *ἐλεγχος*, taking his departure from a seemingly remote principle to which the respondent readily assented, Socrates would draw from it some unexpected but undeniable consequence inconsistent with the opinion impugned. In this way the respondent was brought to pass judgment upon himself. If, as often happened, having been thus reduced to a state of doubt or perplexity (*ἀπορία*), the respondent at this point withdrew from the inquiry, something had been gained, inasmuch as he was now more or less conscious of his ignorance. If however he was willing to make a further effort, Socrates would direct him to suitable instances, and so help him to frame a generalized opinion which did not depend upon the passions and the prejudices of the moment. In this constructive process, though the element of surprise was no longer necessary, the interrogative form was carefully retained, because it secured at each step the conscious and responsible assent of the interlocutor. The generalizations to which Socrates led (*ἐπανήγεν*) his hearers were sometimes rules of conduct. Thus in Xenophon's *memorabilia* iv. i. 3 he argues from the known instances of horses and dogs that the best natures stand most in need of training, and then applies the rule to the instance under discussion, that of men. But more frequently the end of his loose induction was a *definition* (*λόγος*). For example, in iv. 6 he

Theory of education.

Dialectic.

brings his interlocutor to a definition of 'the good citizen,' and then uses it to decide between two citizens for whom respectively

Definitions.

superiority is claimed. Moral error, he conceived, is largely due to the misuse of general terms, whereby in the heat of the moment we commit ourselves to inconsistency of action: and in order to exclude error of this kind he steadfastly sought, and studiously encouraged others to seek, *the what* (τὸ τί), or the definition, of the various terms by which the moral quality of actions is described. The definitions which he had thus

Ethics.

collected formed, not perhaps a system of ethics, but at any rate a body of ethical doctrine. Blessed with a will of unusual strength, he had learnt to ignore its operations and to regard knowledge as the sole condition of well-doing. Where there is knowledge,—that is to say, practical wisdom (φρόνησις), the only knowledge which he recognized,—right action, he thought, followed of itself: for no one knowingly prefers what is evil. Virtue then is knowledge. 'Piety,' 'justice,' 'courage,' and 'temperance,' are the names which 'wisdom' bears in different spheres of action, and, as such, can be acquired by education and training, though one soul has by nature a greater aptitude than another for the acquisition of it. The object of this knowledge is the Good, that is to say, the useful, the advantageous. Utility thus becomes the measure of conduct and the foundation of moral rule and legal enactment.

243. Regarding 'the pursuit of knowledge for its own sake' as a delusion and a snare, and steadfastly affirming 'the autonomy of the individual intellect,' Socrates had no pretension to be the founder of

Socratic schools.

a school. Yet he bequeathed to posterity an example of unswerving obedience to duty, a cogent dialectical method, and the principle that, though knowledge is unattainable, opinion may notwithstanding be bettered: and no fewer than four schools, divergent in doctrine, but in greater or less degree animated by his spirit, were established by his immediate followers. The Cynic School—so called

The Cynics.

in the first instance from the gymnasium of Cynosarges, where Antisthenes of Athens, the founder, was in the habit of teaching—chiefly occupied itself with the practice of an austere morality. Virtue, said Antisthenes, is the supreme end of human life, and of itself, given the strength of a Socrates, suffices to happiness. It can be taught, and once learnt can never be lost. The virtuous man, who alone is wise, has few wants, and despises the world, its ambitions, its censure, and its praise. Pleasure is no better than madness. From a logical standpoint resembling that of Zeno of Elea, Antisthenes maintained that nothing can be called by any name but its own, and on the strength of this axiom he denied the possibility of definition other than enumeration of parts, of predication which is not identical, of falsehood, and of contradiction. In a controversy with Plato about the theory of ideas Antisthenes seems to have shown acumen rather than insight. He had been a pupil of Gorgias,

and was himself a stylist and a rhetorician. His asceticism and independence were caricatured by his follower **Diogenes** of Sinope, a 'Socrates Furens,' who ostentatiously set at naught the elementary duties and the ordinary decencies of civilized society. In pronounced contrast to Antisthenes, **Aristippus** of Cyrene found the end of existence in the pleasure of the moment. Happiness is the aggregate of such pleasures. Virtue is good in so far as it is a means to them. One pleasure is as good as another. Nevertheless the wise man will so enjoy, that he shall never be the slave of enjoyment: he will use pleasure, but he will not be carried away by it. With this ethical scheme was connected the psychological theory that pleasure is a smooth movement, discomfort (*πόνος*) a rough one. He is said to have been a disciple of Protagoras; and on insufficient grounds critics have attributed to him the theory of sensation propounded by Plato in *Theaetetus* 156 A ff. The Cyrenaic school, by which Aristippus' not altogether consistent system was variously interpreted and developed, numbered amongst its members the mathematician **Theodorus**, the pessimist **Hegesias**, the moralist **Anniceris** the younger, and the rationalist **Euhemerus**. Like the philosophies of Antisthenes and Aristippus, the philosophy of **Eucleides** of Megara was predominantly ethical: but his presentation of the Socratic morality was influenced by his previous familiarity with the Eleatic metaphysic. The good, he said, howsoever called, whether wisdom or God or reason or whatever else, is One. But this principle was doomed to infertility: and accordingly the later Megarians **Eubulides**, **Alexinus**, and **Diodorus Cronus**, gave themselves to the elaboration of the method of indirect proof by which the founder had recommended it, and were chiefly notorious for the invention of fallacies akin to those of the Eleatic Zeno. In **Stilpo** (fl. 320), who shared Antisthenes' logical extravagances, his indifference to pleasure, and his hostility to Plato, Megarianism joined hands with Cynicism. Since Schleiermacher, it has been customary to identify the idealists mentioned by Plato in his *sophist* with the Megarians, and on the strength of this identification to attribute to them a theory of ideas: but this is antecedently improbable; and, as the phrases which describe the doctrine of 'the friends of ideas' are all of them borrowed from the *Phaedo*, it is obvious to suppose that Plato is here criticizing his own earlier teaching. The Eleo-Eretrian school, founded at Elis by **Phaedo**, and transferred to Eretria by **Menedemus**, had ethical and critical tendencies similar to those of the Megarians. The members of these four schools are commonly spoken of as 'incomplete Socratics,' inasmuch as they severally appropriated a part, but only a part, of Socrates' teaching. Contrariwise, **Plato**, 'the complete Socratic,' accepting it as a whole, and developing it harmoniously, evolved from his master's agnosticism a comprehensive system of metaphysical, physical, and ethical philosophy.

The
Cyrenaics.

The
Megarians.

The Eleo-
Eretrians.

C. PLATO AND THE OLD ACADEMY.

244. Aristocles, surnamed **Platon**, son of Ariston, was born at Aegina, according to some in 427, according to others in 429. **Plato's life.** Having previously studied Heracleiteanism under Cratylus, he became acquainted with Socrates about 407. After Socrates' death in 399, Plato with other Socratics retired to Megara. A journey to Egypt, Cyrene, Magna Graecia, and Sicily, followed. At Syracuse he provoked the enmity of Dionysius the elder, who caused him to be sold as a slave at Aegina. Having been bought and liberated by Anniceris of Cyrene, he returned to Athens about 387, and established, first in the gymnasium of Academus, afterwards in his garden hard by, the school or college¹ known as the Academy. He visited the younger Dionysius at Syracuse in 367, and again in 361. He died at Athens in 347.

Holding with Socrates that the teacher should elicit and suggest rather than inculcate and dogmatize, and consequently preferring question and answer to continuous exposition, Plato, while he deserted his master's example so far as to resort to written discourse, was careful still to retain the conversational form. Hence, with the single exception of the *apology of Socrates*, all the Platonic writings are dialogues. In general, Socrates—an idealized, Platonizing, Socrates—is the chief speaker: but in the *Parmenides*, the *sophist*, the *politicus*, and the *Timaeus*, he takes a subordinate position, and in the *laws* he does not appear. The discussion—itself sometimes lively and dramatic, sometimes severely dialectical—is now and again broken by imaginative interludes called *myths*, which, making no pretension to exactitude of detail, claim notwithstanding to be true in substance (*Phaedo* 114 D), and, where science fails, serve to bridge the gap. For example, the making of the universe, prehistoric society, the day of judgment, and the future state, are mythically described.

245. For the purposes of this article the principal dialogues may be roughly characterized as follows. The *Euthyphro*, the *Charmides*, the *Laches*, and the *Lysis*, which exemplify Socrates' method of ethical definition, together with the *Crito*, which is a sort of supplement to the *apology*, show little, if any, advance upon Socrates' doctrine, and may therefore be called Socratic. The *Protagoras*, the *Euthydemus*, the *Gorgias*, and the *Phaedrus*, in which the principal phases of sophistry, past and present, are sharply criticized, together with the *Meno*, which indicates at once the merits and the limitations of Socrates'

¹ The schools, which in the eye of the law were religious brotherhoods (*θλασται*) for the worship of the Muses, were foundations for the encouragement of education, study, and research. Together with its chapel (*μουσείον*), each school commonly possessed a hall, a library, lecture-rooms, chambers for teachers and students, a garden, and walks. The society included a head, lecturers, and students, who dined together at a commemoration feast and on other stated days.

teaching, and the *symposium*, which exhibits the effect produced by it upon his hearers, afford a comprehensive survey of current educational theories, and may be thought to form an 'educational' group. In the masterpiece called *republic*, which has for its thesis 'that justice is better than injustice,' Plato propounds a theory of an ideal state, and recommends a scheme of education, which may, he thinks, under favourable circumstances, supersede law and give a new sanction to morality, and in any case will fit the recipient for the citizenship of 'the heavenly city'.¹ The curriculum proposed—which presumably represents that pursued in the Academy—has for its keystone *dialectic*, the science of ideas or real existences. The theory of ideas is used in the *Phaedo* to prove the immortality of the soul, and in the *Cratylus* is opposed to the Heraclitean doctrine that knowledge of names is knowledge of things. The *Parmenides*, the *Philebus*, the *Theaetetus*, the *sophist*, and the *politicus*,—in which Plato, writing as a philosopher for philosophers, investigates Being and Becoming, Knowledge and Opinion—may be described as 'professorial' dialogues. The *Timaeus* is at once a cosmogony and an ontology. Lastly, in the sober, serious, treatise called the *laws*, he legislates for a best state possible, that is to say, for a state less repugnant to Greek tradition and practice than the ideal city of the brilliant and speculative *republic*.

246. Of the order in which these writings may be supposed to have succeeded one another, something, however inadequate, must now be said. It is generally acknowledged, though not universally, that the so-called Socratic dialogues represent the earliest period of Plato's literary activity; that the dialogues here styled educational preceded the *republic*, which again is confessedly earlier than the *Timaeus*; and, on the strength of ancient testimony, that the *laws* was Plato's last work. All else is matter of dispute. In particular, there is an eager controversy about the *Parmenides*, the *Philebus*, the *Theaetetus*, the

Order of the dialogues.

¹ See by all means the peroration at the end of the ninth book. The first book, which is introductory, defends the 'civic' morality of the day against the attacks of certain sophists. The principal argument—which includes descriptions of the ideal state and its degradations, together with the theory of philosophic virtue—occupies books II—IX. The tenth book consists of two appendices, (a) on imitative poetry, supplementary to what has been said about *μουσική* in the third book, (b) on rewards and punishments in a future life, a matter expressly left out of account at the beginning of the second. The ideal state is an aristocracy, in which there are three classes: (1) the artisans and husbandmen, who have no share in the administration; (2) the auxiliaries, who, having been selected in infancy, and trained to philosophy under the eye of the state, act, from the age of thirty-five to that of fifty, as commanders in war, and subordinate magistrates at home; (3) the guardians, who, continuing at the age of fifty to be distinguished in knowledge and in action, rule their country, their fellow citizens, and themselves, in accordance with the good. It would seem that Plato hardly hopes to introduce into the contemporary Greek state the three communities, of wives, of children, and of property, but that in recommending the establishment of a standing army and certain mitigations of the severity of war between Hellenic states he offers positive contributions to contemporary politics.

sophist, and the *politicus*, some¹ regarding these dialogues as dialectical exercises preparatory to the dogmatic teaching of the *republic*, whilst Professor L. Campbell and others find in certain of them a style later than that of the *republic*, as well as an advanced doctrine approximating to that of Aristotle. The present writer, who holds that the dialogues in question look back to the *republic*, forward to the *Timaeus*, and, together with the *Timaeus*, represent Plato's philosophic maturity, would arrange the principal writings in five groups corresponding to successive stages of Plato's intellectual development, namely, (1) Socratic dialogues, (2) educational dialogues, (3) *republic*, *Phaedo*, *Cratylus*, (4) *Parmenides*, *Philebus*, *Theaetetus*, *sophist*, *politicus*, *Timaeus*, (5) *laws*.

247. Bred in the unqualified scepticism of the later Heracleiteans, Plato found a temporary refuge from it in the 'dialectical' theory and the educational practice of Socrates. But it soon appeared that education itself, if it was to do all that might be expected of it, should have for foundation, not consistency, but truth. Where then was truth to be found? Not in objects of sense; for, as Heracleitus had shown, the object of sense is in perpetual flux: not in universals; for, as Socrates had admitted, the universal, that is to say, the *one-in-many* described in a Socratic definition, has only a subjective being. If there is any truth, there must needs be existences other than phenomena: and to a Socratic, trained in 'adductive reasoning and general definition,' it was obvious to suppose that each such existence was a perfect unity imperfectly represented by and in a plurality of homonymous particulars. In this way Plato arrived at the hypothesis that *beside pluralities of phenomena, transient, mutable, imperfect, which become, and are objects of opinion, there are unities, eternal, immutable, perfect, which really exist, and are objects of knowledge*. This hypothesis, generally known as the theory of *ideas*, Plato never abandoned.

248. But what are the contents of the world of ideas? and how is each idea related to its particulars? Plato himself acknowledges doubts and difficulties in regard to these manifestly important details, and Aristotle expressly distinguishes the original conception of the doctrine from its maturer form. It is therefore advisable, if only by way of precaution, to discriminate Plato's several presentations of the theory of being. First, in the *Phaedrus*, there are, we are told, certain self-existences, such as justice, temperance, knowledge, beauty, of whose transcendent perfection, known to us in a previous life, we are reminded by their earthly counterparts: and in the *symposium*, the lover of beauty rises from the sight of beautiful things, through the apprehension of the corresponding universal, to the knowledge of the eternally existent self-beautiful. In

¹ According to Professor Zeller the *sophist* (which confessedly follows the *Theaetetus* and is followed by the *politicus*) is referred to in the *Parmenides*, the *Parmenides* in the *Philebus*, and the *Philebus* in the *republic*, which was separated from the *Timaeus* and the *laws* by a considerable interval of time.

short, Plato postulates really existing unities, known to us through universals by means of reminiscence (*ἀνάμνησις*), of which unities phenomenal pluralities are imperfect likenesses: but he neither explains the particular's participation (*μέθεξις*) in the unity, nor determines the content of the supra-sensual world. Secondly, in the *republic* and the *Phaedo* the fundamental dogma is supplemented by two subordinate propositions: (1) wherever a plurality of particulars are called by the same name, there is a corresponding form or idea (*εἶδος, ἰδέα*), *republic* 596 A, compare *Phaedo* 65 D, and (2) it is the presence, immanence, communion (*παρουσία, κοινωνία*), of this form or idea which makes participant particulars what they are, *Phaedo* 100 D, compare *republic* 476 A. Furthermore, at the head of the ideas stands the idea of good, the *αὐτὸ ἀγαθόν*, and it is by ascending to it through definitions (*λόγοι*) collected from particulars, that those definitions, hitherto provisional, are to be converted into, and certified as, adequate representations of corresponding ideas, *republic* 509 B ff. Here the doctrine is not only a theory of being and a theory of knowledge, but also a theory of predication, available to explain the paradoxical attribution of different, and even inconsistent, epithets to the same particular, *Phaedo* 102 A ff., compare *republic* 523 A ff. Thirdly, the professorial dialogues investigate a theory of being (*Parmenides* 128 E ff., *sophist* 246 B f., 248 A ff.) apparently identical with that of the *republic* and the *Phaedo*, and object to it—(a) that, if the idea is immanent, its unity is sacrificed in the world of sense, *Parmenides* 130 E ff., compare *Philebus* 15 B; (b) that, if, wherever a plurality of particulars are called by the same name, there is a corresponding idea, its unity is sacrificed in the world of ideas, *Parmenides* 132 A B; (c) that, whereas the theory professes to account for predication, it confessedly does not deal with any proposition which has an idea for its subject, *Parmenides* 129 E, *sophist* 248 D. But while the two subordinate propositions—(1) every synonymous plurality has an idea corresponding to it, (2) the idea is immanent in particulars—are thus called in question, the fundamental dogma—beside pluralities of phenomena, which become, and are opined, there are eternal immutable unities, called ideas, which are, and are known—is steadfastly maintained, *Parmenides* 135 B. Fourthly, in the *Timaeus* there are ideas (*εἶδη αὐτὰ καθ' αὐτά*) of animates (that is to say, of the world, of each of the stars, of mankind, of the animal and vegetable kinds), and of the four inanimate elements, 51 B, but apparently of nothing else. These ideas neither participate in one another, nor are participated in by anything, 52 A. Particulars become, or come into being, in space, by imitation (*μίμησις*) of the ideas.

249. What then shall we think of these various statements? Do they describe one and the same theory, steadfastly and consistently maintained from the *Phaedrus* to the *Timaeus*? or do they represent the several stages of a progressive doctrine?

Modern
orthodoxy.

Modern authorities, ignoring or explaining away those assertions of the idea's immanence, by which the teaching of the *republic* and the *Phaedo*

seems to be differentiated, on the one hand from that of the *Phaedrus* and the *symposium*, and on the other from that of the *Timaeus*, and conjecturing that the doubts and difficulties indicated in the professorial dialogues were raised only that they might be summarily set aside, for the most part incline to the former of the alternatives offered. As for Aristotle's assertions, to the effect that Plato, in his later years, rejecting ideas of relations, of things evil, and of the products of art, recognized ideas of natural kinds only, and attempted to explain the relation of idea and particular by their resolution into common elements, these are put down to misunderstanding and misrepresentation: or, if they are hesitatingly and grudgingly allowed, the changes in question are treated as arbitrary modifications of the system, made at a serious sacrifice of general consistency, and nowhere acknowledged in Plato's writings. In short, modern orthodoxy, herein agreeing with popular sentiment, assumes that Plato in his later dialogues restates and applies, but does not substantially alter, the doctrine propounded in the *Phaedrus* and the *symposium*.

250. The present writer cannot persuade himself, either that Plato rested in this vague though beautiful speculation, or that, having abandoned it for something more philosophical, he omitted to record his change of front. Nor can he think that the later doctrine was 'a fog of mystical Pythagoreanism' (J. S. Mill). On the contrary, he finds in the six dialogues—*Parmenides*, *Philebus*, *Theaetetus*, *sophist*, *politicus*, *Timaeus*—not only criticisms, nowhere met or withdrawn, of the teaching of the *republic* and the *Phaedo*, but also proposals for the reconstitution of the system on a securer basis. It now appears that ideas of relation (*Parmenides*), of qualities (*Philebus*), of things evil as such (*Philebus*), and of artificial groups (*sophist*), may or must be dispensed with: and accordingly in the *Timaeus* there are substantial forms (*ἀντὰ καθ' ἀντὰ εἶδη*) of 'naturals' only,—that is to say, of the universe and the heavenly bodies, of animal and vegetable species, and of the four elements, fire, air, water, and earth. Further, whereas in the *republic*—where every common name has an idea corresponding to it—all the ideas were separate unities, and yet, by a palpable inconsistency, were participated in by phenomena, in the six dialogues substances (*ἀντὰ καθ' ἀντὰ*), such as man, horse, ranunculus, being unities, are not participated in, but imitated by, or reflected in, particulars, while attributes, such as equal and unequal, great and small, hot and cold, being participated in by particulars, are not unities. As it is the substantial unity, and not the attributed plurality, which here represents the idea of the *republic* and the *Phaedo*, this result—which effectually disposes of the difficulties raised in the *Parmenides* and the *Philebus*—is in exact agreement with the testimony of Aristotle.

251. The system is completed in the *Timaeus*, which explains the relation of idea and particulars by means of what may be called a universal idealism. 'In the *Timaeus*,' says Mr R. D. Archer-Hind, 'Plato teaches that the entire universe

The idealist cosmology.

is the self-evolution of absolute intelligence, which is the same as absolute good. This is differentiated into finite intelligences, subject, through their limitation, to the conditions of space and time. Sensible perceptions are the finite intellect's apprehension, within these conditions, of the idea as existing in absolute intelligence. Thus the perception is the idea, as existing under the form of space.' To prove that the hypothesis thus formulated is sufficient to explain the apparent dualism of our universe,—in other words, to show that *what we call mind, and what we call matter, can both of them be expressed in terms of the thought of one universal intelligence*,—is, in the opinion of the present writer, the purpose of the cosmogonical myth. It may perhaps be interpreted as follows. The one infinite, universal intelligence, in virtue of its intrinsic perfection, thinks primarily, on the one part, the several grades of psychical existence—stars, animal kinds, vegetable kinds—as yet unembodied, and, on the other part, certain regular geometrical figures—pyramid, octahedron, eicosahedron, cube. From these primary, separately existent, thoughts or *ideas*, whereof some are psychical, others geometrical, the supreme mind builds up a *universe of thoughts*, whereof some are animate, others inanimate. First, pluralizing in thought the regular geometrical figures aforesaid, the supreme intelligence furnishes to the world of its thinking four inanimate elements—fire, air, water, and earth. Secondly, conjoining in thought the ideas of the several stars with appropriate portions of the four elements, the supreme mind embodies and localizes the ideas of the stars as animate unities enduring throughout time. Thirdly, these animate thoughts of the supreme mind, conjoining in thought the ideas of the animal and vegetable kinds with appropriate portions of the four elements, embody and localize the several sorts of animals and plants, not as animate unities enduring throughout time, but as animate pluralities of transient individuals. Thus each star is a secondary thought in which an idea or primary thought of the supreme intelligence is locally and corporeally conceived throughout time by the supreme intelligence itself: while each animal or plant is a tertiary thought in which an idea or primary thought of the supreme intelligence is locally and corporeally conceived, not, throughout time, by the supreme intelligence, but, for a brief space of time only, by one of its secondary thoughts, the stars. In this way, infinite mind develops within itself a complete universe of thoughts. Now this universe of thoughts is, as seen from within by one of the finite intelligences included in it, a *universe of things*. For that which superior mind *conceives* as a subjective thought, inferior mind *perceives*, however imperfectly, as an objective thing. That is to say, the stars, which are to us eternal sensibles, are what they are, and where they are, because infinite mind so conceives them throughout time; and animals and plants, which are to us transient sensibles, are what they are, where they are, and when they are, because finite minds, of a superior grade to our own, so conceive them intermittently. In a word, infinite intelligence, thinking in accordance with the laws of its own perfection, creates our animate universe, and the

several grades of animates which it contains, in and by the act of thought

252. If then each particular animate is the presentation in time and space of a corresponding idea or immutable law of the thought of infinite mind, particular animates which have their common origin in a given idea form a distinct group or *natural kind*, and, as members of it, in virtue of their specific or common characteristics, become the objects of scientific study. It is the function of science to ascertain the resemblances and the differences of the natural kinds, and to classify them according to their mutual relationships. But it is the idea, and not the members of the natural kind, which being eternal exists, and being immutable is the object of knowledge. The study of groups which do not originate in ideas and consequently are indeterminate,—for example, the several metals and minerals, which are indeterminate combinations of the four elements,—though a rational and innocent amusement (*Timaeus* 59 D), is not to be accounted scientific.

253. Plato was a moralist before he became a metaphysician: but his ontological speculations in their successive phases necessarily affected his theory of ethics. In the Socratic dialogues, while to the *collection* by which his master had obtained definitions he adds *division* by which to test them, his ethical aims and principles are those of Socrates. In the educational dialogues, while against certain sophists and others he steadily upholds the morality of society, he desiderates a philosophic morality having for its basis something better than opinion: and in the *republic* he conceives himself to have such a morality in prospect. For when once the dialectician of the future has arrived at the knowledge of the good, that knowledge will be for him a sufficient incentive to virtuous action, and henceforward rewards and punishments, by which 'civic' morality, *δημοτική τε καὶ πολιτική ἀρετή*, is maintained, will be superfluous. In the professorial dialogues, howsoever they are related to the *republic*, the knowledge of the self-good is confessed to be unattainable. Accordingly the *Philebus* finds man's good, now no longer identified with the self-good, in a life of contemplation attended by its appropriate pleasure. Finally, in the *laws*, despairing, as it would seem, of 'philosophic' morality, Plato makes a vigorous attempt to reform the 'civic' morality of contemporary Greece.

254. Whereas Plato had been mainly occupied in laying ontological foundations, his nephew **Speusippus**, who in 347 succeeded him in the headship of the school, was principally concerned with the rearing of a physical superstructure. Indeed he is said to have renounced the theory of ideas. That is to say, abandoning the idealism which Plato had propounded as an explanation of natural kinds, Speusippus was content to postulate their existence and to give himself to the study of classificatory biology. In 339 Speusippus was succeeded by **Xenocrates**, a man of high character, keenly interested

Natural
kinds.

Ethics.

The Old
Academy.

in ethics, who however attempted to represent, and in reality obscured, the metaphysical theory of the founder. Misconceiving the term *ideal number* which Plato in his dislike of crystallized technicalities had used to describe the idea, Xenocrates interpreted the phrase arithmetically, thus exposing himself to a laborious and crushing rejoinder in the concluding books of Aristotle's *metaphysics*. Polemo, who followed Xenocrates in 314, took definitely the ethical direction. With Crates, who succeeded Polemo in 270, the so-called Old Academy ended.

D. ARISTOTLE AND PERIPATETICISM.

255. Born in 384 at Stageira in Chalcidice, Aristoteles, son of Nicomachus, came to Athens in his eighteenth year, and entering the Academy, was attached to it as learner and teacher for at least twenty years. After the death of Plato in 347, Aristotle spent three years at the court of Hermeias of Atarneus. A visit to Mytilene followed. In 343 or 342 he was called to Macedonia to undertake the education of Alexander, and there he remained until his pupil was about to start upon his expedition into Asia. In 335 or 334 Aristotle returned to Athens and established in the Lyceum the so-called Peripatetic school. Twelve years later, having been accused of offences against religion, he retired to Euboea, where he presently died in 322. It would appear that, had he been at Athens in 339, he, and not Xenocrates, might have succeeded Speusippus as scholarch of the Academy.

Aristotle's
life.

Whilst Plato in his dialogues had provided for his pupils elaborate exercises to be first studied in private and afterwards, perhaps, supplemented by oral examination, Aristotle appears to have relied upon dogmatic discourses addressed to a small class of students, and to have used his pen chiefly in the preparation of notes and syllabuses. In this way, and seemingly in this way only, certain characteristics of his writings are explicable: absence of literary form; obscurities, brevities, and redundancies of expression; unconventional illustrations; loose references to remarks previously made; familiar allusions to members of the school. These laxities are the more significant, because his published works, of which only fragments remain, had a reputation for style. Happily the philosophical writings, whether schemes of lectures prepared by Aristotle himself or notes taken by attentive hearers, were treasured up in the school, and used as texts by his successors. The principal treatises, under their medieval titles, may be classified as follows:

Writings.

- i. logic: the *organon*, including *categoriae*, *de interpretatione*, *analytica priora*, *analytica posteriora*, *topica*, *de sophisticis elenchis*.
- ii. philosophy: *metaphysica*.
- iii. physics: *physica*, *de caelo*, *de generatione et corruptione*, *meteorologica*.
- iv. biology: *historia animalium*, *de partibus animalium*, *de incessu animalium*, *de generatione animalium*, *de anima*, *parva naturalia*.

v. ethics and politics: *ethica Nicomachea*, *ethica Eudemia*, *magna moralia*, *politica*.

vi. literature: *rhetorica*, *poetica*.

256. It has been seen that Plato's theory of ideas carried with it a

Relation to
Plato.

theory of cosmic kinds which should make the study of nature possible. But it was the eternal immutable idea which alone he accounted existent and knowable: the study

of nature was, he thought, the means by which man's finite intelligence might approximate to the knowledge of the transcendental unities. Thus the theory of kinds, as originally conceived, depended upon and subserved the theory of ideas. But the two theories were not inseparable, and Aristotle, whose positive intellect was attracted by the one, repelled by the other, peremptorily and impatiently dismissing the theory of ideas, addressed himself to the reconstitution of the theory of kinds. There are, he held, in nature certain determinate kinds of animate existence, namely, animal and vegetable species (*metaphysics* Z ii etc.). Apart from accidents or attributes which are not common to all the members

Material and
formal causes.

of a kind, each of its several members is, in thought, though not in fact, resolvable into two constituents, or has two causes (*αἴτια*), namely, *matter* (*ύλη*), recipient of form, and

form (*εἶδος*, *μορφή*), determinant of matter. Of these, matter—out of which, by combination of the primary qualities, hot and cold, wet and dry, the four elements are developed (*de gen. et corr.* B ii, iii)—is, in the last analysis, a purely indeterminate substratum or potentiality; form is the sum of the characteristics which distinguish the member of the kind as such. Hence, while it is in virtue of its matter that the particular exists in time and space and that it becomes perceptible, it is in virtue of its form that it is what it is and that it is known. From this point of view the specific form is spoken of as *τὸ τί ἦν εἶναι*, *the what makes it so*, *the true what*, of the particular. Thus, whereas Plato had recognized a primary, transcendental form, the idea, which alone exists and is knowable, and, together with it, secondary, imitative, forms, which 'having their entrances and their exits' (*εἰσιόντα τε καὶ ἐξιόντα Timaeus* 50 C) are localized in matter and immanent in particulars, Aristotle, rejecting the transcendental form as a superfluous hypothesis, retained the immanent form, and, as will presently be seen, attributed to it an objective reality.

257. But beside the material cause and the formal, which together

Moving and
final causes.

constitute the particular (*τὸδε τι*) or composite (*σύνολον*), Aristotle required, to complete his conception of animate existence, a moving cause (*ἀρχὴ κινήσεως*) and a final cause

(*οὐ ἔνεκα*). For these he looked, proximately, to a previous member of the species, which member as moving cause, having the continuance of the species for its final cause, transmits the specific form to its offspring (*metaphysics* Z viii); for 'man generates man' (*ἄνθρωπος ἄνθρωπον γεννᾷ*); and, ultimately, to the *prime unmoved mover* (*πρῶτον κινῶν ἀκίνητον*),

namely, God or mind, who, existing apart as pure form, energizes continually (*ἐνεργεῖ ἑχών*) in the contemplation of himself, and attracts (*κινεῖ ὡς ἐρώμενον*) the universe (*metaphysics* Δ vii). In this way, mind, the prime unmoved movent, together with its thoughts,—for these also are *unmoved movents*,—originates and maintains the orderly motions of the earth and the heavenly bodies and the orderly successions of animal and vegetable life. Inasmuch as mind and its thoughts are one, the government of the universe is monarchical (*metaphysics* Δ vii and x): but Aristotle does not attempt, as Plato had done, to identify the governor and the governed.

258. In the single instance of the prime unmoved movent, mind exists apart from matter: soul however can never do so.

By soul (*ψυχή*) Aristotle means 'the first actuality of a natural organized body': that is to say, the activity which, whether displayed or not, is implicit in the living body, and distinguishes it from the body which is lifeless (*de anima* B i, ii). In plants soul is nutritive. In animals it is at any rate nutritive and sensitive, and may be appetitive and motive also. In man alone it is not only nutritive, sensitive, appetitive, and motive, but also intellectual. Sensation—in which sense receives the form of sensible objects without their matter, as wax receives the impress of a seal—implies a ratio between object and subject, and requires an intervening medium (*de anima* B iii—xii). Beside the five special senses, of which touch is primary, Aristotle seemingly recognizes a common or central sense, which (1) is conscious of sensation, and (2) distinguishes the impressions received by one special sense from those received by another (*de anima* Γ i, ii: *de somno* ii: *de iuventute* iii). But it is not easy to say how this common or central sense is related to the *passive mind* or *παθητικὸς νοῦς* which receives from the senses their impressions and submits them for interpretation to the *active mind* or so-called *νοῦς ποιητικὸς*. It is the active mind which alone is capable of existing apart from soul and from body. When it so exists, it is 'independent of external objects, has no inessential attributes, is essentially operant, is immortal, is eternal' (*de anima* Γ v). This it is which appears in *metaphysics* Δ vii as the prime unmoved movent.

259. What is it then which Aristotle accounts primarily existent (*πρώτως ὄν*)? It is not Plato's transcendental idea. It is not the *universal* (*καθόλου*), the common characteristic or characteristics by which species are combined in a genus, or particulars in an artificial group. It is not the purely receptive substratum called matter. It is not the particular in which form and matter are conjoined. It is the form, and nothing but the form. That is to say, the primarily existent is the sum of the specific characteristics of the particular, in contradistinction to its recipient matter and to attributes which accidentally belong to it: and these specific characteristics of the particular, in so far as they are available for purposes of classification.

Psychology.

First
existence.

constitute the object of knowledge. Thus what exists and can be known is *species*. But the species exists only in its members, and therefore it is in them that it must be studied. Such is the doctrine explicitly stated in *metaphysics Z*. Nevertheless, in the *categories*, a treatise, commonly, but not universally, attributed to Aristotle, primary existence is ascribed to the particular or composite of form and matter. This terminological discrepancy does not however imply inconsistency of thought. For the primarily existent form, of which we hear in the *metaphysics*, is form immanent in a particular: and the primarily existent particular, which is spoken of in the *categories*, is the particular in so far as it represents the species to which it belongs, and no further.

The Peripatetic metaphysic differs less from the Academic than might be at first sight supposed. Aristotle's specific form, conjoined with matter and immanent in the particular, is Plato's εἰσὶόν τε καὶ ἔξισόν, the reflexion, in matter, of the transcendental idea: and Plato's transcendent idea reappears in Aristotle's scheme as a thought of the prime unmoved movent, which thought is, not the form of the species, but its origin and its consummation. The theory of natural kinds is common to the two systems. Plato showed the way to classificatory biology and Aristotle walked in it.

260. When he had settled his philosophical position and his relations

to Plato, Aristotle was free to address himself to his proper function, that of making sciences; and accordingly his extant writings deal, not with metaphysic only, but also with logic, physics, biology, psychology, ethics, politics, and literature.

Of all Aristotle's achievements, the greatest perhaps was the invention of logic. The group of treatises generally known as the *organon* includes an enumeration of categories or heads of predication; a study of the quality, quantity, and conversion of propositions; a detailed investigation of the syllogism and its figures; a summary discrimination between *adduction* (ἐπαγωγή) or generalization from known particulars in regard to those particulars, and *example* (παράδειγμα) or inference from known particulars in regard to unknown particulars, effected by means of a *general* more or less perfectly certified; a theory of scientific research; a treatise on disputation; and a classification of fallacies. In dealing with these matters, Aristotle distinguishes between *dialectical debate*, by which the premisses of demonstration are provisionally justified, *demonstration*, by which the consequences of given premisses are ascertained, and *sophistry* or *eristic*, pursued, irrespectively of truth, with a view to argumentative success. In the main, logic still is what Aristotle made it. In physics and biology his work has been superseded: for, here

at any rate, πάντων ὑπερῆς χρόνος. But his physical speculations occupied the field for more than eighteen centuries: and modern biologists speak with respect of his insight and his powers of observation.

Natural sciences.

261. Three treatises on ethics are included in the Aristotelian canon: (1) the *Nicomachean ethics*, said to have been so called because edited by Aristotle's son Nicomachus, or (less probably) because dedicated to him, (2) the *Eudemian ethics*, now generally acknowledged to have been written by Eudemus on the basis of Aristotle's exposition, (3) the *magna moralia*, a comparatively short treatise, so called because each of its two books or volumes is considerably larger than each of the ten books and the seven or eight books into which the *Nicomachean ethics* and the *Eudemian ethics* are respectively divided. Books v, vi, vii of the *Nicomacheans* are word for word the same as books iv, v, vi of the *Eudemians*. That these three books properly belong to the *Eudemians* and have been transferred to the *Nicomacheans* to fill a gap, has been argued on the grounds that (a) the theory of pleasure and pain in our vii is inconsistent with the theory of pleasure in x, and at x. v. 6 is explicitly rejected; (b) the statement made at x. vii. 1, ὅτι δ' ἐστὶ θεωρητικὴ [sc. ἡ τοῦ νοῦ ἐνέργεια κατὰ τὴν οἰκείαν ἀρετήν], εἴρηται, is not true of our vi; (c) the investigation of the intellectual virtues in vi, while it does not give to speculative wisdom the precedence affirmed in x, is not inconsistent with the Eudemian doctrine of the supremacy of καλοκάγαθία. In fact, the life of the καλὸς καὶ ἀγαθός, which in the *Eudemians* takes the first place, can hardly be said to differ from the practical life, ὁ κατὰ τὴν ἄλλην ἀρετὴν βίος, which in the *Nicomacheans* is accounted δευτέρως εὐδαίμων.

262. Aristotle's ethical teaching had for its aim, not to establish the distinction between right and wrong, nor to investigate the means by which right and wrong may be discriminated, nor to formulate moral rules, nor to improve moral rules already existing, but—on the assumption that current morality, whether capable of improvement or not, justifies itself theoretically and explains itself in practice—to ascertain what scheme of life is, for an individual duly qualified by nature and by circumstances, the most desirable and the best. According to the *Nicomachean ethics*, man's highest good (ἀνθρώπων ἀγαθόν) or well-being (εὐδαιμονία) consists in the discharge of his appropriate function, and is therefore to be found in an energy of soul characteristic of the best and completest of virtues, such energy being sustained throughout a complete period of existence (I. vii. 15): whence it follows that external goods are not parts of well-being, but, in so far as they are necessary to the display of the energy aforesaid, conditions of it. Now virtue is of two sorts, moral and intellectual. Moral virtue—the virtue of the semi-rational division of soul, that is to say, of the appetites and emotions, which results when that division is obedient to the rational division—is 'a deliberate habit belonging to a mean which is relative to ourselves and defined by judgment in such manner as a man of practical wisdom would define it' (II. vi. 15). The chief moral virtues are courage, temperance, liberality, munificence, magnanimity, self-respect, gentleness, justice. The intel-

Ethical
treatises.

Ethics.

lectual virtues are, practical judgment (*φρόνησις*), the virtue of that subdivision of the rational division which controls the semi-rational division and speculative wisdom (*σοφία*), the virtue of that purely intellectual subdivision of the rational which may perhaps be called reason (*νοῦς*). Since reason is obviously the best part of the soul, its virtue, speculative wisdom, which has for its appropriate energy contemplation (*θεωρία*), is the best of virtues. Whence it follows that the highest good attainable by man is to be found in the life of contemplation or philosophy, the practical life of moral virtue ranking second to it. Nevertheless, the philosopher will loyally do his duty as a member of society. The highest good, being an energy, brings with it the highest pleasure.

263. Such being the question proposed, and such the answer returned to it, it remains to enumerate briefly the subjects dealt

The *Nicomachean ethics*.

with in the several parts of the *Nicomacheans*. In I, having stated his subject and settled preliminaries, Aristotle formulates in general terms his conception of human happiness, and indicates a popular psychology sufficient for his immediate purpose. Book II defines moral virtue and enumerates the moral virtues. The voluntary and the involuntary are investigated in III. i—v, so far as is necessary for the understanding of the term ‘deliberate,’ used in the definition of moral virtue. In III. vi—xii, IV, and V, the conception of moral virtue as a mean is justified by a detailed examination of the moral virtues and of the corresponding vices or formed habits of excess and defect. Book VI has for its subject the intellectual virtues, and concludes with an emphatic assertion of the intimate relationship which subsists between moral virtue and practical wisdom. In Book VII are included, first, an account of the imperfect moral states called continence and incontinence, and secondly, a treatise on pleasure and pain, which are respectively identified with unimpeded and impeded energy. Books VIII and IX deal with friendship, which is entitled to consideration both because friendliness is a social virtue, and because friends are the most important of external goods. Under this head Aristotle handles the relations of the citizen to his neighbour, a matter which does not fall directly within the scope either of the *ethics* or of the *politics*. Book X contains (1) a theory of pleasure, which is here regarded as the concomitant of an energy, (2) the interpretation, in the light of results obtained, of the general formula propounded at I. vii. 15, to the effect that the contemplative and practical lives rank respectively first and second, and (3) a disquisition upon the relations of private well-being to public institutions, which serves to connect the present treatise with the *politics*.

264. As in the *ethics* Aristotle is concerned with the well-being of the individual, so in the *politics* he treats of the well-being

The *politics*.

of the community. The city or state (*πόλις*), as opposed to the horde (*ἔθνος*), is a complex organism developed out of the village (*κώμη*), which again springs from the family (*οἰκία*). The city

is then the end or consummation of society, and man is a civic or political animal. Within the family there are three principal relations—master and slave, man and wife, father and children—which relations subsist each for the benefit of its correlative members. The first book, which deals with these matters, and the second, in which certain polities, ideal and real, are criticized, together form a sort of introduction to the work. In Book III Aristotle propounds his theory of polity. The best of cities would be one in which absolute power was exercised for the benefit of all the citizens by one person, or more persons than one, superior to the rest in mind and in body. But this is an unattainable ideal. In default of it, right polities (*ὄρθαι πολιτεῖαι*) are those in which the sovereign (*κύριον*), whether one, few, or many, rules for the benefit of the community: perversions (*παρεκβάσεις*) are those in which the sovereign, whether one, few, or many, uses its power for its own advantage. Of the right polities—aristocracy, monarchy, and polity proper—aristocracy is the best (III. xv. 1286, but compare *ethics* VIII. xii. 1160), because the aggregated virtue of several is better than the solitary virtue of one: and polity proper (*πολιτεία*), in which all rule and are ruled in turn, is the least good. Of the perversions—democracy, oligarchy, and tyranny—democracy, which has the smallest power for evil, is the least bad, and tyranny, which has the greatest power, is the worst. Two principles hold for all the right polities. First, neither birth nor wealth nor virtue has a claim to the exclusive possession of power: all the excellences which operate in the state are entitled to consideration: and consequently all free men must be admitted to a share in the administration. Secondly, irresponsible authority is too great a temptation even for the best of men; and therefore, whether in aristocracy or in monarchy or in polity proper, the sovereign must submit itself to the ‘passionless intelligence’ of law. In Books IV (VII) and V (VIII) we have the scheme of a perfect or ideal state, in which the virtue of the man and the virtue of the citizen are identical. The life of the perfect state is one of practical action. But practical action does not imply aggression and conquest. For the perfect state, the end is not war but peace, just as for the best man, the end is not business but leisure. Unlike Plato, Aristotle did not hope to realize his ideal: but an impracticable scheme may carry practical lessons, and accordingly Aristotle proceeds to plan the institutions of a new Callipolis. Unluckily this part of the treatise is incomplete: but at any rate we learn what he had to say in reply to Plato about the use and the abuse of music in education and otherwise. The investigation of (1) the ideal state, is then theoretical or speculative. In the three books which remain Aristotle addresses himself to practical applications, and on the strength of a careful study of the several known forms of polity proper, democracy, oligarchy, and tyranny, inquires (2) what is the best of practicable constitutions, (3) what sorts of constitution are suitable to given sorts of people, (4) how a constitution may be established and maintained

in accordance with given assumptions or conditions, (5) what is the best constitution for the generality of states, (6) what circumstances tend to change, to overthrow, and to maintain, the several sorts of constitution. Polity proper, in which, as all rule and are ruled in turn, the middle class is influential, is, he thinks, not only the most stable of constitutions, but also for the generality of states the best, being indeed inferior only to the unattainable ideal. For its maintenance he would rely, as Athens did and the United States do, upon supreme or constitutional laws (*νόμοι*), unalterable, or alterable only with special formalities, to which constitutional laws, upheld by courts of justice, all ordinary enactments (*ψηφίσματα*) must conform. Oligarchy, the polity of the rich and well-born who are few, and democracy, the polity of needy freemen who are many, (to say nothing of short-lived tyranny,) are vastly inferior to polity proper: but these perversions admit of many varieties and combinations, which Aristotle takes duly into account. The citizen population of a Greek state was very small, so that Aristotle knew nothing of representative government. Once indeed, VII (VI). iv. 1318^b, he mentions a trifling application of the principle, but it is plain that he does not perceive its significance. On the other hand, the number of slaves was, in comparison, very great, and in consequence a Greek democracy had some of the characteristics of aristocracy. The eight books of the *politics* are commonly read in the order I, II, III, VII, VIII, IV, VI, V: but it is possible to regard VI as a supplementary study of composite constitutions, and accordingly to make no further change in the traditional order than the transfer of VII and VIII to a position between I, II, III and IV, V, VI. Presumably VII and VIII were placed at the end on account of their unfinished condition. Aristotle's learning, tact, and wisdom, are nowhere seen to greater advantage than in this masterly treatise.

265. It is a familiar paradox that, whilst Plato and Aristotle are commonly regarded as 'the two poles of human intelligence,' Cicero speaks of Academics and Peripatetics as 'agreeing in fact, differing only in appellation.' There is truth in both appreciations. The two philosophers

Academicism
and Peripateticism.

started from different standpoints: for, to the metaphysician Plato, that which is actual in time and space was *ipso facto* unreal, whilst, to the physicist Aristotle, that which is actual in time and space was the only reality. But they joined hands over the theory of natural kinds. And, when the followers of Plato abandoned the theory of ideas, and the followers of Aristotle lost something of their master's eagerness in the study of nature, the difference between the two schools was inconsiderable, especially in ethics, the subject of which Cicero was principally thinking. The greatness of Aristotle was not fully understood until the middle age, when the whole of civilized Europe acknowledged his intellectual supremacy, and rightly saw in him 'the master of those who know.'

266. Aristotle's successor was **Theophrastus**, head of the school from 323 until about 288, author of numerous treatises in almost every department of inquiry. Of these there are extant two botanical works and fragments of a valuable history of physical opinions, a storehouse upon which subsequent epitomators have drawn largely: also a fragmentary discussion of metaphysical problems and the graphic sketches known as the *Characters*. **Eudemus**, to whom the *Eudemian ethics* is ascribed, rivalled Theophrastus in erudition. Both these philosophers showed little independence in speculation, adhering to the main lines of their master's system. But **Strato** of Lampsacus, who was for eighteen years head of the Lyceum, in succession to Theophrastus, made an attempt to carry physical research farther and to develop Aristotle's cosmology into a system of naturalism. He rejected the transcendent deity as the first cause of motion, and accounted for all phenomena by the operation of natural necessity. In psychology he ignored the distinction between intellect and the sensitive soul. He referred all sensation to the central principle of the soul (*ἡγεμονικόν*), which he located in the brain. After Strato the Peripatetics popularized ethics or devoted themselves to historical, rhetorical, and philological studies to the comparative neglect of logic, physics, and metaphysic. When Andronicus of Rhodes had published a new edition of Aristotle's writings, *circa* 70 B.C., the arrangement and exposition of the master's doctrine generally became the occupation of the school. Alexander of Aphrodisias (*circa* A.D. 198—211) was the most celebrated expositor: his commentaries on the *topica*, *meteorora*, *de sensu*, and parts of the *analytica* and *metaphysica* are preserved, together with dissertations of his own on many disputed points of doctrine.

The Peripatetics.

E. LATER SCHOOLS: EPICUREANS, STOICS, SCEPTICS.

267. By this time the original impulse of curiosity in Greek inquirers was well nigh exhausted. The organization and growth of the sciences which had proceeded so vigorously in the fourth century were followed by a marvellous development, particularly of mathematics and astronomy, in the Alexandrian age: but the great men of science—from Archimedes and Eratosthenes to Galen—even when adherents of this or that school of philosophy, troubled themselves little about metaphysics, so engrossed were they with their own special investigations. Political and social changes, the loss of Greek freedom, the opening of the East to Greek culture under Alexander's successors, the decay of patriotism, similarly tended to discourage speculative thought. Philosophy to obtain a hearing must offer the individual what he most needs, and just then the search for truth had less attraction than the search for happiness. In the accepted threefold division of philosophy, practical *ethics* on a basis of reasonable certainty was held to be more important than the other two

Characteristics of the Later Schools.

sciences, viz. *logic* and *physics* (including cosmology and psychology). In all three departments the later schools make free use of the ample materials which their predecessors had accumulated, and as a rule decline to hazard a new solution of the old problems. Materialism, in one or other of its phases, was the prevailing tendency. Whatever exists acts and is acted upon, but to the thought of the age action through contact was alone conceivable. Thus the corporeal nature of mind and mental phenomena became a presupposition of their reality.

268. Born in 341, son of an Athenian schoolmaster who had settled as a colonist in Samos, **Epicurus** began early the study of philosophy under Nausiphanes, a Democritean. In after days he boasted that he had been self-taught, and was a merciless critic of all other philosophers. Having made disciples in Mytilene and Lampsacus, he removed in 306 to Athens and there founded a school. The scene of instruction was his garden: the society which met there was united by close friendship and veneration for the master: it resembled a church rather than a philosophical school. In this peaceful retirement Epicurus wrote some 300 separate treatises, the most important a work *On Nature* in 37 books, which had reached Book xv in 300/299, while Book xxviii was finished in 296/5. A voluminous writer, he was careless of the graces of style, and aimed solely at clearness. He died in 270, having outlived his two ablest disciples, Metrodorus of Lampsacus and Polyænus. His doctrines were passed on almost unaltered from generation to generation by his followers, of whom the Roman poet Lucretius alone has any claim to distinction. An epitome of the system, in three epistles, ascribed to Epicurus, has been preserved by Diogenes Laertius, with a famous collection of some 42 excerpts, known as the *Fundamental Tenets* (κύρια δόξα).

269. To this eminently practical thinker, the one thing needful was wisdom for the conduct of life; experience was the only basis of certainty and the study of nature desirable only in so far as it freed men from superstitious terrors. Hence Epicurus headed a reaction against science. The logic and metaphysic of Plato and Aristotle he distrusted as dealing with words, not things. For logic he substituted 'canonic,' an inquiry into the Canon, or test of truth. The exact sciences, mathematics and astronomy, rested, he thought, on unproved assumptions. Historical and literary studies were superfluous intellectual luxuries. 'Keep clear of all liberal culture' is his advice to a young friend. Sick of the verbal logomachies of his predecessors, hostile to a *a priori* argument and suspicious of abstract terms, he appealed to the common sense of the plain man. He made sensation the standard of truth. Internal feelings and the perceptions of sense are always true and trustworthy. Even beyond momentary impressions, certainty extends to 'preconceptions' (προλήψεις), i.e. the fainter 'ideas' resulting from previous 'impressions,' the vague and blurred

Epicurus.
Life and
writings.

General As-
pects.

Canonic.

images stored up in memory, and further to the mental impressions (*φανταστικά ἐπιβολαὶ τῆς διανοίας*) whence we derive our belief in the existence of the gods. For whatever we feel to affect us—our minds or our senses—must be real in virtue of so affecting us. The senses, then, are infallible. Scepticism is self-contradictory. What possible means have we of checking the evidence of sense? One sense cannot convict another, for they all have different objects. Reason cannot be invoked as umpire, for reason depends for its data upon the senses. Thus Epicurus is forced to explain error as the result of mental activity: opinion and fancy, movements in the mind consequent upon and distinct from the movement of sensation, mix false with true: our judgment is often deceived, our senses never. Yet even in everyday life, much more in physical inquiries, it is necessary to go beyond the direct testimony of the senses and frame opinions respecting the unknown. Epicurus had grasped the problem of inductive logic, that what we do not see has to be explained on the analogy of what we do see, the unknown by familiar and observed fact. Here a new canon is required. An opinion or explanation, he holds, is true if it is supported by observed facts and not contradicted by them; if unsupported or contradicted by facts, it is false.

270. In the belief that ignorance and superstition were the chief obstacles to happiness, Epicurus aimed at presenting such a physical theory as would exclude divine interference and render absurd the supposition of design in the arrangements of the world. Accordingly he reproduced the atomism of Democritus. But there is an enormous difference in the spirit of the two systems: for Epicurus was supremely indifferent to the accuracy of scientific results so long as his practical object was attained. In regard to celestial phenomena, such as thunder and eclipses, he refused to be restricted to one out of several admissible conjectures. When he has suggested possible causes which involve no supernatural intervention, enough has been done: in the painstaking research of the 'system-mongers,' in truth for its own sake, he took no interest (he called it *ἰδιολογία* and *κενὴ δόξα*). Again, while in general appropriating Democritus' principle that 'every event has a necessary cause, a principle indispensable if divine interference is to be excluded,' Epicurus spoiled the consistency of his system by a violent protest against invariable natural necessity. 'It were better,' he says, 'to believe the tales concerning the gods than be the slaves of inexorable fate.' The protest is apparently intended to justify (1) freedom of the will (cf. *τὸ παρ' ἡμᾶς ἀδέσποτον*), which he in some sense assumed, and (2) the spontaneous deflection (*παρέγκλισις*) of the falling atom so that it swerves slightly out of the perpendicular, an expedient to account for collisions of the atoms and world-making which would otherwise be in his view inexplicable.

However, in spite of these inconsistencies, Epicurus deserves credit for preserving faithfully the main outlines of the atomistic theory. All is either body or empty space; everything real is corporeal, the properties of

bodies having no independent existence and time itself being an 'accident of accidents' (σύμπτωμα συμπτωμάτων). The atoms are immutable, although possessed of parts which are mentally distinguishable; the changing properties of bodies are due to the motion of their atoms. Soul is a corporeal thing, a compound of fragile delicate atoms kept together by the body enclosing them, to which they in turn transmit sensation. Besides a nameless substance, which is the seat of sensation, atoms of air, fire and wind combine to constitute soul: irrational soul (*anima*, which feels), if spread all over the frame, rational soul (*animus, mens*, thought, passion, will), if close packed in the breast. Perception and imagination are due to the impact, in the one case upon the senses, in the other upon the material mind, of the films or husks (εἶδωλα) which are continually thrown off from the surface of bodies (σπερέμνια). It is a corollary of this doctrine that the mental images of the gods have real causes, and hence is inferred that the gods are immortal and perfectly happy beings, constituted of the finest atoms and dwelling in the lucid interspaces between the worlds (μετακόσμια): with the working of that 'vast automatic mechanism,' the universe, they have nothing to do.

From such a school scientific discoveries could hardly be expected; it is, however, surprising to find with what wonderful imaginative insight Lucretius, following doubtless in the footsteps of his master, has sketched the earlier stages of human progress and the origin of language and the arts.

271. Epicurus held, with Aristippus and Eudoxus, a disciple of Plato
 Ethics. whose views are combated by Aristotle, that pleasure is the sole good, pain the sole evil. By pleasure may be understood (1) the positive and exciting 'pleasure of motion' (ἡ ἐν κινήσει), or (2) the negative and calm state, 'pleasure of rest' (ἡ καταστηματική), of which freedom from pain is the condition. Upon comparison of the two, since every positive pleasure is conditioned by a painful want which it removes, Epicurus pronounced pleasure in the second sense to be the end, herein differing from Aristippus. 'When all discomfort has been removed pleasure may be varied but cannot be heightened.' The body is the original source of all pleasant sensation—nor could Epicurus conceive of a good wholly independent of sense: but mental pleasures are of higher value as extending into the past and future by memory and expectation. Actual bodily pains, however severe (and experience shows that the pains of disease, if chronic, are tolerable; if violent, do not last long), may be allayed and outweighed by ideal mental pleasures recalled or anticipated. This was one consideration making for the attainment of happiness. Another was the inculcation of an almost ascetic plainness of living: the simplest and easiest satisfaction of 'natural and necessary' desires, the neglect of the 'natural but not necessary' wants to which luxury ministers and the extirpation of those other vain desires 'unnatural and unnecessary' which rest on a mere sentiment. Virtue again, though not an end in itself, is valuable as a means

to pleasure: no one can live pleasantly without living wisely, well and justly. It seems clear that Epicurus aims at a neutral state of feeling, like the *εὐθυμία* of Democritus, and that pleasure is a misnomer for such tranquil enjoyment. To explain the origin of civil society Epicurus falls back upon the fiction of the social contract. Natural justice is a compact of expediency for the prevention of mutual injury, and the wise man is a gainer by observing the compact. The great deterrent from wrong-doing is the alarm and sense of insecurity attending it. Friendship should be cultivated as a means to enjoyment. If in the process favours are bestowed unsought, such apparently disinterested conduct resembles that of the sower who commits the seed to the soil in expectation of a future harvest.

The Stoic school took its name from the fact that its founder, **Zeno** of Citium in Cyprus (perhaps 336/5 to 264/3), lectured in the Stoa Poecile, a colonnade of the Agora at Athens adorned with the frescoes of Polygnotus. Zeno is said to have been of Phoenician descent: attracted to Athens by his taste for philosophy, he studied under Crates the Cynic, Stilpo the Megarian, and the Academics Xenocrates and Polemo, before he opened a school of his own. He was held in great respect in his later years by the Athenians and by Antigonus Gonatas, King of Macedon. His successor in the headship of the school was **Cleanthes** of Assos who died in 232/1; to him succeeded **Chrysippus** of Soli in Cilicia (*circa* 280—Ol. 143, 208/4), who completed and consolidated the Stoic doctrine, adding largely on the logical side, and surpassing even Epicurus in the number of his treatises or 'articles,' 705 in all. Of these three philosophers only fragments survive, except the *Hymn to Zeus* of Cleanthes. The Stoics were preeminently moral philosophers, proud to be reckoned among the Socratics. Zeno began as a Cynic¹; indeed Aristo, one of his early pupils, never advanced beyond this stage. The Cynic mode of life, though not inculcated in the school, was always tolerated as a justifiable protest against prevalent corruption. In the end, dissatisfied with Cynic contempt for theoretic knowledge and culture, Zeno came under other influences. From the Old Academy he took the conceptions of 'natural objects of desire' and 'life according to nature.' The Peripatetics he followed in a mass of physical details and, with a difference, in his distinction between active force and passive, inert matter. But Pantheism, the chief feature of Stoic physics, was learnt not from Aristotle but from Heracleitus, whose own doctrine of Logos or Reason has been completely obscured for us by its

Stoics.

Relation to predecessors.

¹ See § 243. The later Cynics carried still further the contempt of Antisthenes for theory and attacked unsparingly Greek culture, civil society and religion. Some like Diogenes and Crates acquired notoriety by their mode of life, half mendicants, half preachers of morality. The main ideas of Cynicism which Zeno adopted are, the self-sufficiency of virtue, the strength of the moral will, the distinction of things good evil and indifferent, the ideal of the wise man, and cosmopolitanism.

transference to the later system. Out of these multifarious elements Zeno and Chrysippus endeavoured, with more success than their contemporaries, to construct a comprehensive theory of being and knowledge as the basis of conduct.

272. Their system also included formal logic, in the main as laid down by Aristotle in the *analytics*, with some modifications, e.g. an

Logic.

elaboration of the hypothetical and disjunctive judgment and syllogism. The Stoics described the whole subject-matter of formal logic as λεκτόν (literally 'the meaning of spoken words, the thought or idea capable of expression by language'): this they asserted to be incorporeal, and to differ in this respect (1) from the activity of thinking, a mode of the corporeal mind, and (2) from the spoken word, also corporeal. Judgments (ἀξιώματα) and abstract generic notions (ἐννοήματα)—to the Stoics the Platonic ideas are examples—fall under the head of λεκτόν¹. So too time and space, whether filled (*plenum*) or in part, if not wholly, empty (*vacuum*), were pronounced incorporeal and therefore unreal. Again, innovations were made in the treatment of the categories. Aristotle, whose object was to tabulate the various predicates attaching to a given concrete subject (a σύνολον of form and matter), framed ten 'heads of predication' (γένη, or σχήματα, τῶν κατηγοριῶν): these might be reduced to four, substance, quantity, quality, and relation (which the other six illustrate), or in the last resort to two, substance and attribute: further, Aristotle made these heads of predication all coordinate. The Stoics replaced this coordination by a succession. The four highest genera (γενικώτατα) are special determinations of the widest conception, Something (τι), each in turn being more precisely determined by the next. They are (1) substratum or subject-matter, ὑποκείμενον, (2) essential quality, ποιόν, (3) mode or accident, πῶς ἔχον, (4) relation or relative mode, πρὸς τί πως ἔχον. The subordination of all to a single substratum, implicit in each, indicates a definite view as to the general formal relations of real existence.

273. With the Epicureans the Stoics maintain that the corporeal alone is

Physics.

real, since only that which can act and be acted upon really exists. Hence the qualities of bodies (conceived as forms or shaping elements) and mental states (τὸ ἡγεμονικόν πως ἔχον) are necessarily corporeal. But while the Atomists hold that the qualities of organized matter—life, sense, intelligence—are absent from atoms, and conceive motion as obeying rigid mechanical laws, the Stoic affirms the adaptation of means to ends and takes the teleological view of nature as the outcome of intelligence. His fundamental tenet is the unity of the world, which is not an aggregate of unrelated existences—not a fortuitous concourse of atoms—but a living thinking being, an organic whole animated and informed by reason, its parts united by 'sympathy' and its development proceeding by an inner necessity according to unalterable law. Various lines of argument converge in demonstrating the existence and perfection of this

¹ Universals are unreal; only particular things actually exist.

great First Cause, and the absolute dependence of all particular things upon it. This one reality is known, in its various relations, by various names: Zeus, Nature, Providence, Destiny, Reason, Law, Fire, Aether, Breath (*πνεῦμα*). Analysis discloses, it is true, *two* factors or principles (*ἀρχαί*) in all existence: that which is active, or God; that which is acted upon, matter void of quality (*ἄποιος ὕλη*). But since they are inseparable they must not be regarded as coordinate, but as the two-fold aspect of the one reality. Matter—extended, continuous (not discrete, like the atoms), infinitely divisible—is taken in a positive sense, as the material *out of* which particular things are shaped: it is also called substance (*οὐσία*). Thus it stands in sharp contrast to Plato's 'receptacle of generation, *in* which things become' (*Timaeus*) and to Aristotle's potentiality, which so long as it is indeterminate is sheer negation (*στέρησις*). The active principle or moving cause (the sole cause which the Stoics recognized, and necessarily corporeal) has the all important property of tension (*τόνος*), which is manifested in different grades in the different classes of particular things: as a principle of continuity (*ἕξις*) in inorganic bodies, of growth in plants (*φύσις*), as the vital principle of animals (*ψυχή*) and the reason (*λόγος*) of man. The properties of things depend upon the tension of air-currents penetrating their substance, and entirely commingled with it (*κρᾶσις δι' ὧν*). Here, it should be observed, Aristotle's specific forms are materialized and the axiom that two bodies cannot simultaneously occupy the same space is denied. The life of the universe recurs in a never ending series of cycles, each exactly reproducing its predecessors. At first Zeus and the world were identical. Out of his eternal substance (conceived, with a distant anticipation of the nebular hypothesis, as a mass of fiery vapour or warm breath) the orderly universe was evolved by successive stages, the four elements separating from the homogeneous mass and proceeding on their 'way up and down' in Heracleitean phrase (*ὁδὸς ἄνω κάτω*). The world and all its parts are stages in the transformation of the primitive substance: as they have grown up, so they will decay and the end is a general conflagration (*ἐκπύρωσις*) when the world is reabsorbed in Zeus. While upholding the unity of the divine nature, the Stoics felt free to ascribe divinity to its manifestations: thus they accepted, and rationalized, the popular mythology, usually assigning a physical interpretation to the legends, and defended the belief in omens and the practice of divination.

274. Man is a microcosm; his soul is an emanation from the soul of the universe. This fiery breath appears in its greatest refinement in the ruling part (*ἡγεμονικόν*), or inner self. All soul, Psychology. as such, has the faculties of perception and activity. The human soul has also an intellectual faculty (*διάνοια, νοῦς*). In the ruling part, or centre of the soul's life, the psychic functions first become actual. What are called 'parts' of the soul—the five senses and the powers of speech and reproduction—are better regarded as functions of the one central soul: they are defined as means of communication (*πνεύματα νοερά*) between the ruling

self and the sense organs. By the possession of reason even the low faculties of perception and desire which man shares with the brutes, are raised to a higher level, and become rational faculties; in perception man is self-conscious; his activity is self-determined. All vital processes thought included, are physically conditioned by exhalation from the blood (*ἀναθυμιαίσις*). The soul survives death, but in the most favourable case only until the end of the present cycle. Thus the Stoics reject absolutely the Platonic assumption of irrational faculties. The unity of the soul is their main tenet—in fact, the key to their psychology: man feels, knows, wills with the whole soul.

Such a psychology favours an empirical theory of knowledge. Perception is conditioned by the presentation (*φαντασία*) of an external object, upon which the percipient subject has then to pass judgment. Cleanthes crudely explained this presentation as an imprint (*τύπωσις*), like that of a seal upon wax: Chrysippus preferred the vaguer term modification (*ἐπεροίωσις*) of mind, which, be it remembered, is material. The content of sensation is not always valid: here the Stoics joined issue with Epicurus and sought to lay down the conditions of possible hallucination. Right reason (*ὀρθὸς λόγος*) was made the standard of truth by the older Stoics, *i.e.* Zeno and Cleanthes. For this Chrysippus substituted perception and preconception (*πρόληψις*): the one applying to sense-presentations, the other to presentations of reason. He found in common notions, spontaneously and uniformly developed in all men (or rather, the analytic notions which all alike bring to experience) the norms of rational knowledge. The standard of true perception can be more precisely stated as the 'apprehending' presentation (*καταληπτικὴ φαντασία*), whereby the mind grasps the properties of the object: a presentation of peculiar clearness and distinctness, extorting assent from the percipient, provided he is sane and in good health. Under the pressure of controversy with the sceptics of the New Academy, further conditions were accepted as necessary; otherwise the perception is not of the true 'apprehending' or cognitive kind. In perception as such no knowledge is contained: the mind's activity by tension and assent converts sensation into apprehension (*κατάληψις*) and knowledge. In Zeno's simile these stand related as open hand, bent fingers, and clenched fist.

Here it is convenient to notice two sections of Stoic ethics, treating (1) of desire¹, (2) of emotion, whose importance is mainly psychological. As the unity of the soul was emphasized by the denial of a division into rational and irrational parts, so under the single head of desire (*ὀρμή*) were included all the springs of action, animal instincts as well as the impulses of reason or passion. The Stoics contended, against Epicurus, that the original impulse of all sentient creatures is not to pleasure but to self-preservation, the maintenance of the organism unimpaired. This appetite is anterior to, and presupposed in, all desire of particular pleasures. In

¹ Or 'impulse,' or 'appetition' (*ὀρμή*).

rational beings desire, moulded by reason, is directed to that order and harmony of nature and of human society, which is moral good (*καλόν, honestum*).

As the Stoics recognized no irrational faculty and attributed to the one inner self all mental processes, even impulses from which vicious acts proceed must be functions of reason, although of reason perverted. Such impulses are the emotions or passions (mental pain and pleasure in the present, fear and vicious desire in regard to the future). They may be roughly described as unnatural, irrational movements of soul, or more precisely as impulse in excess (*ὄρμη πλεονάζουσα*). The excess appears in a false judgment, or over-hasty opinion (*δόξα πρόσφατος*), and in the consequent unnatural excitement. Hence by confusion of intellectual error with its effects emotion is said itself to be false judgment, *e.g.* fear to be the belief that an impending misfortune is an evil. Holding these views the Stoics were unable to acquiesce in the mere regulation of emotion, and demanded its entire suppression. As false judgments are under our control, so also are their effects the emotions. The Stoics were firm in upholding human responsibility: Cleanthes expressly excepts from divine agency the evil wrought by men through their own folly. On this question the Stoics tried to harmonize opposing tendencies. Their physical principles made everything determined, human action being a link in the chain of causality. In their ethics, however, they assume that man can of himself realize happiness: all things obey the law of the universe; it is for him to comprehend it and to cooperate with it by willing obedience. His freedom consists in and is restricted to this.

275. On the basis of Stoic physics was constructed a moral idealism, remarkable for rigid consistency and absolute severance from everyday life. The end which as a rational being man chooses for his proper good, is activity and not mere passive feeling, is consistent and harmonious, is further a life in agreement with nature (*ζῆν ὁμολογουμένως τῇ φύσει*). Here (1) the nature of the universe, or (2) the individual nature of man may be intended; on either interpretation the agreement of part with whole can only mean the subordination of the individual to the order of the universe: the Greek conception of good to be pursued making way for that of law to be obeyed, though a law of which man himself as a rational being is the giver. Good then is moral good alone, decried by opponents as an abstraction or chimera, but to the Stoic an ideal to be realized in a life of moral virtue. Virtue is good in itself, apart from all consequences, an indivisible whole which we possess entirely or not at all, incapable of increase or diminution, an abiding condition (*διάθεσις*) of soul, not a temporary attribute (*ἕξις*), inalienable, so long as reason lasts, one and the same, however various the circumstances under which it is manifested. While each virtue is defined as knowledge of a particular region of fact, yet so closely are they connected that where one exists, the rest are also to be found. Right intention, the essential characteristic of all, may be described as force of will due to the tension or bracing of

Ethics.

soul-substance. These principles imply a revaluation of objects and of the actions directed to their attainment. There is no mean between rational and irrational, virtue and vice, good and evil: all vice and all vicious persons are at an infinite remove from virtue, as he who is a hand's-breadth beneath the surface and he who is a hundred fathoms down will alike be drowned. While moral good and moral evil stand thus apart, the world of intermediate objects, which are means, not ends, still admits of classification according as they are relatively natural (*κατὰ φύσιν*), or unnatural (*παρὰ φύσιν*), the former being preferred in comparison with the latter, e.g. health is desired and not sickness, though neither is in itself a good. Zeno expressed this by calling the one class 'promoted' and the other 'degraded' (*προηγμένα, ἀποπροηγμένα*), and by ascribing to them value, positive and negative (*ἀξία, ἀπαξία*) respectively. So too with conduct: besides truly virtuous action, technically called righteousness (*κατόρθωμα*), its opposite, vice, being sin, Zeno recognized a wider sphere of natural and proper conduct, for which he coined the term *καθῆκον*, very inadequately rendered by external or relative duty. This was variously defined as that which admits of rational defence, as action appropriate to our natural constitutions, or as congruity in life: apparently it included acts of prudent self-regard (e.g. the care of health) and the superficial observance of other elementary moral rules. This at any rate is true of intermediate 'duty' (*μέσον καθῆκον*): duly performed, with full knowledge and right intention, this becomes perfect duty which is indistinguishable from righteousness.

Ethical doctrine assumes a concrete form in the description of the wise man, who is alone free and happy, never led into error or hurried into emotion, endowed with true wealth and beauty, in no way inferior to Zeus himself, since length of time cannot increase the perfect happiness he realizes by right conduct. In contrast with this picture is the universal depravity of the actual world, where none are righteous and sin is folly and madness. Applied ethics, recognizing the real condition of mankind, endeavours to alleviate and remedy it. Later Stoics urged men to commence a progress or pilgrimage to virtue. The moral improvement of individuals and the cure of souls diseased became ever more important aims. Stages of progress were distinguished and the highest stage approximated to the unattainable ideal.

While respecting the independence of the individual and holding the wise man self-sufficient, the Stoics taught that men are born for society. We are all members one of another, citizens by birth of that universal state the city of God, of which families and canton states are adumbrations, with a single government and mode of life for all the world, where is neither Greek nor barbarian, bond nor free. Cherishing such aspirations, which even the Roman empire mocked rather than satisfied, the Stoics could hardly take a hearty interest in the politics of small Greek communities. But if the ties of patriotism were loosened, the obligation to justice, universal benevolence, and humane treatment of slaves was enlarged and enforced.

276. Widely as the two systems differed, Epicurus and the Stoics agreed in regarding philosophy as essentially a practical pursuit and happiness as its end. The same practical aim was followed by the Sceptics: negative conclusions and renunciation of the search for truth were to them only means of attaining peace of mind. **Pyrrho** of Elis (*circa* 365—275), the first in the Sceptical succession, propounded quietism empirically from observation of the contradictions in sense perceptions and in opinions and customs. Of the nature of things we can know nothing: our attitude therefore should be a cautious suspension of judgment (*ἐποχή*), whence results mental calm, freedom from passion (*ἀπάθεια*), and absolute indifference (*ἀδιαφορία*) so far as outward things are concerned. In the affairs of life the Sceptic should follow custom; whenever in so doing he pronounces an opinion, it is with the mental reservation that this opinion is *not more* (*οὐδὲν μᾶλλον*) true than its opposite. Pyrrho left no writings: his views are known from a satirical poem (*Σάλλοι*) of his follower **Timon** of Phlius. Of later Pyrrhonists **Aenesidemus**, who reduced the sceptical arguments to ten heads or tropes (*τρόποι*), and **Sextus Empiricus** (*circa* A.D. 200) are the most important. The works of Sextus which have come down to us are the *Pyrrhonian Hypotyposes* in three books and *Against the Mathematicians* in eleven books, of which the first six are concerned with the different branches of a liberal education, grammar, rhetoric, geometry, arithmetic, astronomy and music, while the other books vii—xi deal with philosophy proper. These writings present not merely a complete exposition of the sceptical argument but also a mass of invaluable information respecting contemporary schools of dogmatists. Meantime Scepticism had gained an independent footing in the Academy, where **Arcesilas** of Pitane in Aetolia (*circa* 315—240) engaged in vehement controversy with the Stoics and their head. The question at issue between them was chiefly the basis of certitude, and Academic scepticism retained this polemical and dialectical character throughout with consequences profoundly affecting all contemporary schools. Arcesilas used to argue both sides of every question: he contended (1) that for every true presentation of sense there is a corresponding false one which cannot be distinguished from it: (2) that for conduct a reasonable probability is as safe a guide as knowledge. This last suggestion received its full development from **Carneades** of Cyrene (214—129), the ablest of all the Post-Aristotelians, and the only philosopher of any originality in the four centuries after Chrysippus. His acute and persistent criticisms forced many Stoics to modify their doctrine. His contributions to a positive theory start with the observation that perceptions do not occur in isolation, but that each perception forms part of a group, the members of which may be separately investigated. Hence he distinguished three grades of probability. A perception may be (1) probable in itself: or (2) it may derive support from the probability of the other perceptions, occurring along with it. If all the concomitants are present, this is so far a guarantee of truth. Or (3) not satisfied with testing a single perception we may examine each

member of the group to which it belongs: the absence of contradiction throughout will lend a cumulative effect to the probability of each. The Carneades was careful to distinguish the subjective from the objective standpoint: for the Stoic division of objects into cognizable and incognizable he substituted one into probable (*i.e.* apparently true) and improbable. Without relaxing the rule that we must suspend our judgment he could allow probable opinions to be formed, and claim for high degree of probability that for all practical purposes it was as useful as the certainty of the dogmatists.

277. For centuries the four leading schools, Academics, Peripatetic Epicureans, and Stoics, continued to teach and to dispute Eclectics. The result of their controversies was in the end insensibly to modify opposing views. After 156 B.C. the study of philosophy was introduced at Rome, and changes were made to suit the needs of the ruling class, keenly interested in literary culture and willing to make acquaintance with the new subject for which they had little or no aptitude themselves. **Panaetius** of Rhodes (185—110) and **Poseidonius** of Apamea (130—46) took an active part in popularizing Stoicism for the Romans. Neither was orthodox: Panaetius denied the general conflagration, and disbelieved in divination: Poseidonius gave up the unity of soul by admitting an irrational faculty: both were students and admirers of Plato. Even orthodox heads of the school in the second century B.C., like **Diogenes** of Babylon, recast the formula for the ethical end in order to meet the objections of Carneades. Stoic influences in turn encroached upon Peripatetic physics (as may be seen from the spurious Aristotelian treatise *de mundo*) and ethics. Nor did the Academy, which had offered such vigorous opposition, maintain its independence. After **Philo** of Larissa (*circa* 88 B.C.) had admitted that in their own nature things are cognizable, although not by the Stoic criterion, **Antiochus** of Ascalon (*circa* 78 B.C.) terminated the long controversy by accepting nearly all the distinctive Stoic doctrines and boldly asserting in defiance of plain fact, that they had always been doctrines of the Academy and had originally been borrowed by Zeno. Antiochus thus professed to restore the Old Academy; later there arose a school of Neo-Pythagoreans who professed with no greater truth to have revived the teaching of Pythagoras. But the most famous of these revivals and the last strange vicissitude in the fortunes of Plato's foundation, was the rise of Neo-Platonism. **Plotinus**, an Egyptian (*circa* A.D. 250), who never succeeded in writing Greek idiomatically, once more resumed the consideration of the metaphysical problems which had long been persistently ignored. Fifty-four of his tracts were collected by his pupil Porphyry and have come down to us arranged in six Enneads or sets of nine. He began with a refutation of materialism and substituted for it an idealistic theory of the universe, systematically elaborated; although incorporating much from Plato and something occasionally from Aristotle he was in the main original. He defended the freedom of the will, distinguished three grades of virtue of which the lowest was cathartic or moral virtue, and defined the end

which the philosopher should realize as the union of the soul by ecstasy with the divine. The acumen and sobriety of their founder did not long satisfy the Neo-Platonists, who ran riot in fantastic speculation as they grew more absorbed in magic and oriental superstition, until in A.D. 529 Justinian closed the school at Athens and a small band of recusant philosophers took refuge with Chosroes of Persia.

Each of the later schools stands not merely for a body of reasoned doctrine, but primarily represents a certain mental attitude or theory of life. The Epicurean ideal includes much more than the contented enjoyment of tranquil pleasure. There is the elation which springs from conscious enlightenment and the sober mind freed from prejudice, that greatest bane of our peace. The Sceptic found congenial occupation in the examination of intellectual problems and the refutation of all possible knowledge; Carneades, like Hume, conducted a fruitless inquiry into every phase of opinion, with the keenest logical subtlety. The Stoics on the other hand, with unwavering faith in reason, claim for the actual order of things the distinctively religious emotions of men. Such, at least, is the teaching of the two great Stoics whose works have come down to us. **Epictetus** of Hierapolis (*circa* A.D. 90) first a slave and afterwards a freedman, was an earnest teacher of morality whose life was an embodiment of his doctrine. He wrote nothing himself, but from his disciple the historian Arrian we have four books of the *Discourses of Epictetus* and the *Encheiridion* or manual of excerpts. They inculcate the autonomy of the will, the duty of absolute submission to the divine order of nature. Man's fellowship in the rational system of the universe implies a privileged position of sonship, whereby he can grow into the mind of God and make the will of nature his own. The great aim of life should be the formation of right judgments, universal benevolence, endurance and apathy, 'to bear and forbear.' The famous meditations of the emperor **Marcus Aurelius Antoninus** (A.D. 120—180) *To himself*, *Tὰ εἰς ἑαυτόν*, in twelve books, breathe the same spirit tempered at times by eclectic tendencies, passing doubts and tender melancholy.

Epictetus—
M. Antoninus.

The most important hand-books are perhaps the following: E. Zeller, *Die Philosophie der Griechen*, 5 vols. Leipzig. E. Zeller, *Grundriss der Geschichte der Griechischen Philosophie*, 10th edition, 1911, Leipzig. F. Ueberweg, *Grundriss der Geschichte der Philosophie*, revised by M. Heinze, Part I, 10th edition, 1899, Berlin. T. Gomperz, *Griechische Denker*, 3 vols. Leipzig. (Zeller's *Grundriss*, Ueberweg's *Grundriss*, four volumes of Zeller's *Philosophie der Griechen*, and Gomperz's *Griechische Denker*, have been translated into English.) H. Ritter et L. Preller, *Historia Philosophiae Graeco-Romanae ex fontium locis contexta*: curavit E. Wellmann, 9th edition, 1913, Gotha. H. Diels, *Die Fragmente der Vorsokratiker*, 2 vols. 3rd edition, 1912, Berlin. For the pre-Aristotelians, the first book of Aristotle's *metaphysics* is all-important. R. D. Hicks, *Stoic and Epicurean*, 1910, and E. V. Arnold, *Roman Stoicism*, 1911. For the post-Aristotelian period the following contain valuable materials: H. Diels, *Doxographi Graeci*, 1879. H. Usener, *Epicurea*, 1887. A. C. Pearson, *Fragments of Zeno and Cleanthes*, 1891. J. von Arnim, *Stoicorum veterum fragmenta*, 1903. Cp. also J. Adam's *Texts...on Greek Philosophy after Aristotle*, 1902. For detailed bibliographies, see F. Ueberweg's *Grundriss*.

III. 3. SCIENCE.

THE history of Greek science falls into two periods, which may be divided, with sufficient accuracy, at the year 300 B.C. In the first, which may be called the Hellenic period, science was ancillary to speculative philosophy, and some knowledge of its progress is necessary for understanding the philosophical literature of the time. In the second, which may be called the Alexandrian period, science passed into the schools, and was studied for its own sake, and its history is recorded in many books written by professors for the students of their faculty, and unreadable to anybody else. In a manual such as the present, it seems proper to give more space to the first period than to the second, and to say more of geometry, the Greek science *par excellence*, than of the other sciences. Arithmetic requires a few preliminary lines to itself.

278. The Greeks never at any time possessed a good set of arithmetical symbols. When writing became a common art, they used for 5, 10, 100, 1,000, 10,000 the initial letters of the names of those numbers, viz.: Π (πέντε), Δ (δέκα), Η (έκατόν), Χ (χίλιοι), Μ (μύριοι). Upright strokes indicated units under 5, and there were compendia, ϩ, ϩ̄, ϩ̄̄ for 50, 500, and 5000. Thus MXXXϩHHϩ̄ΔIIII stood for 13,768. These symbols were used, at least in public inscriptions, for some centuries after the alphabetic signs, with which we are more familiar ($\alpha = 1$, $\beta = 2$, $\varsigma = 6$, $\iota = 10$, $\kappa = 20$ etc.), were invented. The latter are found first on Ptolemaic coins and papyri of the third century B.C. They are not, as is frequently said, of Phoenician origin, and seem to have been the invention of some Alexandrian *savant*, who knew the proper places of the obsolete letters F and Q, but not that of ϩ. Both these sets of symbols are excessively clumsy for actual operations in arithmetic, as anybody can see who attempts to multiply MHΔΠ by MMϩ̄, or ϩ̄̄ by βϩ̄, and it is probable that all sums were done on the ἄβαξ, ἄβάκιον, or 'reckoning-board,' which was divided into columns for units, tens, hundreds etc., while, in each column, the digit (so to say) required was represented by so many beans or pebbles (not exceeding nine). Obviously, with such a table, operations in all the four rules can be managed, though multiplication and division must have been very awkward, especially if the multiplier or divisor were high numbers. Fractions were a standing difficulty, and the Greeks did not operate with them until they had reduced them to a series of submultiples (*i.e.* fractions of unity). Thus the fraction $\frac{2}{3}\frac{3}{2}$ would be treated, in calculation, as $\frac{1}{2} + \frac{1}{3} + \frac{1}{18} + \frac{1}{32}$. Hence, no doubt, for astronomical purposes, sexagesimal fractions (our *minutes* and *seconds*) were used (as in Babylonia), for 60 is divisible by 2, 3, 4, 5, 6, 10, 12, 15, 20, 30; so that a fraction of which the denominator is 60 can be easily reduced to submultiples. But if a fraction was very difficult to handle, some convenient

Practical
arithmetical
(λογιστική).

approximation was used instead, for great nicety was seldom required. Calculation was taught in Greek schools as early as there were any schools at all, and it was a favourite subject of the sophists, among whom Hippias of Elis was the most eminent professor of it. It is probable that merchants and bankers were assisted in their calculations by a complicated finger-symbolism, but clear references to this do not occur before the Christian era. (See Mayor on *Juvenal* x. 249.)

A. THE HELLENIC PERIOD.

279. Investigations into the nature of number were undoubtedly introduced into Greece by Pythagoras, who, finding that many qualities, *e.g.* form, size, stability, beauty, harmony, depended on arithmetical relations, conceived that possibly all qualities might depend on subtle combinations of numbers, and hoped to find, in arithmetic, the key to the universe. His father was a lapidary, and Prof. Ridgeway has ingeniously suggested that he was first led to mathematical enquiries by the observation of crystals. He lived some time in Egypt, and here probably the particular bent of his studies was determined: for the Egyptian priests had long been familiar with some facts to which he afterwards attached great importance. They knew, for instance, that the circumference of a circle is about $3\frac{1}{7}$ of the diameter: that a triangle of which the sides are in the ratio 3 : 4 : 5 must contain a right angle, and that the square on the hypotenuse of (at least some) right-angled triangles was equal to the squares on the sides. Pythagoras discovered for himself, apparently, that the fifth and the octave of the note given by a string can be produced by stopping the string at $\frac{2}{3}$ and $\frac{1}{2}$ of its length respectively: and possibly he was led to the study of proportion by its obvious utility in architecture. From these beginnings it became the favourite pursuit of the Pythagoreans, and, through them, of other philosophers, to classify numbers according to their properties, to find numbers which satisfy given conditions, to find arithmetical analogues for geometrical facts and *vice versa*, and to discern all the other symmetries which are implied when three given magnitudes are in the proportion (*ἀναλογία*) $a : b :: b : c$. From Plato, who was profoundly impressed by Pythagorean learning, and from Aristotle and later writers we learn a great deal about Pythagorean nomenclature and theories; and Euclid in his *Elements* (*στοιχεῖα*) has preserved all the best discoveries of his predecessors. A few specimens must suffice here. Numbers were classified as *even* (*ἄρτιοι*), or *odd* (*περισσοί*): numbers which have no factors but unity are *prime* (*πρώτοι*): products of three numbers are *solid* (*στερεοί*), and some of these are *cubes* (*κύβοι*): products of two numbers are *plane* (*ἐπίπεδοι*), and some of these are *squares* (*τετράγωνοι*), the rest *oblongs* (*ἑτερομήκεις* or *προμήκεις*). The odd numbers, being the differences between successive squares, were also called *gnomons* (*γνώμονες*). A *triangular* number (*τρίγωνος*) was half

Theory of
Numbers
(ἀριθμητική).

the product of any two successive numbers. The root of a square number was called its *side* (*πλευρά*), the root of any other number was itself *inexpressible* (*ἄρρητος*), but both the root and the square were sometime called the *δύναμις* of each other. Those numbers are *perfect* (*τέλειοι*) which are equal to the sum of their factors, and two numbers are *amicable* (*φίλιοι*) to one another when each is the sum of the factors of the other. It was known that a right-angled triangle could be constructed by taking sides in the ratio of 3 : 4 : 5. Pythagoras and Plato invented other arithmetical formulæ for the construction. Pythagoras beginning with an odd number, gives the sides as $2n + 1$ and $2n^2 + 2n$ the hypotenuse as $2n^2 + 2n + 1$. Plato, beginning with an even number gives the sides as $2n$ and $n^2 - 1$, the hypotenuse as $n^2 + 1$. Almost all the propositions of Euclid's 2nd Book are geometrical proofs of arithmetical equations: his 5th Book deals with proportion in all magnitudes: in his 6th Book, propositions 28 and 29 are geometrical solutions of quadratic equations to which Plato alludes in the *Meno*: his 7th, 8th and 9th Books treat of numbers specially; and incidentally he shows how to find the G.C.M. and L.C.M. of two or more numbers (VII. 2, 3, 36, 38), and how to sum a geometrical series (IX. 35). His 10th Book is devoted to the great mystery of incommensurables (*ἀσύμμετρα*); and here especially the great advantage of geometrical symbols appears, for the diagonal of a square is always incommensurable with the sides, and hence any incommensurable quantity can always be represented accurately by such a diagonal. The facts that the diagonal of a square is incommensurable with its side and that the square root of 2 is an inexpressible number were among the earliest secrets of the Pythagorean school: but the further investigation of incommensurables seems to have begun with Theodorus of Cyrene, Plato's mathematical teacher.

280. An elaborate history of geometry before Euclid was written by Eudemus, the pupil of Aristotle, about 330 B.C. This work is lost, but is frequently cited by later historians and schoolmasters, and Proclus, about A.D. 450, gives what appears to be a summary of it. The summary begins: 'Geometry is said by many to have been invented among the Egyptians, its origin being due to the measurement of plots of land. This was necessary there because of the rising of the Nile which obliterated the boundaries appertaining to separate owners.' It goes on to name the chief geometers, in the following order: Thales, Mamercus brother of the poet Stesichorus, Pythagoras, Anaxagoras, Oenopides of Chios, Hippocrates of Chios (who first wrote an 'Elements'), Theodorus of Cyrene, Plato, Leodamas of Thasos, Archytas of Tarentum, Theætetus of Athens, Neocleides, Leon (author of an 'Elements'), Eudoxus of Cnidus Amyclas of Heraclea, Menaechmus, and Deinostratus his brother, Theudius of Magnesia (also author of an 'Elements'), Cyzicenus of Athens, Hermotimus of Colophon, Philippus of Mende. Some hints as to the services of each of these geometers are given by Proclus, but none of their works is

now extant. Many isolated proofs and solutions, however, have survived, and these have been carefully discussed by Bretschneider and Dr Allman. There is evidence to show that the Greek geometers arrived with some difficulty at *general* proofs. Thus we are told that the proposition, that the interior angles of a triangle are equal to two right angles, was at first proved separately for the equilateral, the isosceles and the scalene triangle, and that the sections of the cone were at first obtained from three different sorts of cones: it is probable also that the Pythagorean theorem (Eucl. I. 47) was known for isosceles triangles (in which it might have been suggested by a tiled pavement) long before Pythagoras proved it for all right-angled triangles. The propositions expressly attributed to Thales and Pythagoras would seem to show that, before the time of the Sophists (say 450 B.C.), the main contents of the first two books of Euclid and part of the 5th and 6th were known. The orderly statement of enunciations and proofs is ascribed to Pythagoras, and the various *στοιχεῖα*, issued from time to time, are not to be regarded as mere 'elements,' but as 'systematic arrangements' of the whole subject. It is true that Euclid, in his *στοιχεῖα*, omits much that was known in his day; but his book was not 'elementary' when it was written, and his omissions are mainly due to the fact that he confines himself to the use of the ruler (*κανὼν*) and compasses (*διαβήτης*). Plato certainly seems to have favoured this limitation, though he is said to have invented a machine for the solution of the duplication-problem (to be presently mentioned). The geometry of the circle was not much studied by the Pythagoreans, but was a favourite study in Athens. And here it should be said that Eudemus and Proclus, an ardent Platonist, seem to be unfair to the sophists, of whom the summary names only one, Hippocrates of Chios. There is reason to believe that Hippias of Elis, Antiphon and Meton, if not more, were excellent mathematicians. The progress of geometry in Athens was largely due to the absorbing interest of three problems, viz. quadrature of the circle, trisection of an angle, and duplication of the cube. These led to the invention of new methods of proof and of new mechanical contrivances, and also to the investigation of many new curves and to the geometry of *loci*. For instance, Menaechmus, a contemporary of Plato and the founder of the geometry of conic sections, invented solutions of the duplication-problem in which both the parabola and the hyperbola were used. It was apparently in regard to methods of proof that Plato made his chief contributions to geometry. He added to the legitimate processes the method of analysis, of which the *reductio ad absurdum* is a particular form. The method had no doubt been used before, but Plato seems to have examined it thoroughly, distinguished its types and pointed out its defects. The oldest definition of *Analysis* as opposed to *Synthesis* is appended to Euclid XIII. 5, and was perhaps framed by Eudoxus (ob. 355 B.C.), to whom that proposition is attributed. It states that 'Analysis is the obtaining of the thing sought by assuming it, and so reasoning up to an admitted truth: Synthesis is the obtaining of the thing sought by

reasoning up to the inference and the proof of it.' In other words, the synthetic proof (of a theorem) proceeds by showing that certain admitted truths involve the proposed new truth: the analytic proof proceeds by showing that the proposed new truth involves certain admitted truths: but there are some necessary differences between analysis applied to theorems and analysis applied to problems. The steps of the analysis taken backwards should constitute a synthetic proof, and the Greeks always gave the synthesis after the analysis, lest some condition should have been overlooked or some proposition should not be convertible. Again, a problem may be under some conditions impossible, and this fact is likely to be overlooked in analysis. Hence to the synthetic solution, the Greeks added, if necessary, a *diorismus* or statement of the conditions under which the problem is possible. The invention of the *diorismus* seems to be ascribed, by Eudemus, to Leon the Platonist, but Plato himself uses a kind of *diorismus* in the *Meno* (86 D—87 A), and it is certain that he imparted his discoveries freely to his pupils. Thus he gave the method of analysis to Leodamas of Thasos, and may well have given the *diorismus* to Leon, who merely illustrated it by copious examples. The introduction of the method of analysis is regarded, by competent judges, as one of the greatest advances in the history of mathematics.

281. Next after geometry, the science to which the early Greeks contributed most was astronomy. Here they were assisted by a

Other sciences.

considerable collection of observations made by the Chaldeans, who had discovered, for instance, the period of 18 years (or 223 lunations) which brings round the order of eclipses. Thales, who knew of this discovery, is said to have known also the following facts: that the solar year is 365 days, that the intervals between the equinoxes are not equal, that the moon is illuminated by the sun, and that the earth is spherical. The Pythagoreans are said to have held that the earth revolved round the sun, and Leucippus that the earth had a rotatory motion, though he also held that the sun revolved round it. Other astronomical speculations may be read in Aristotle's book *περὶ οὐρανοῦ*. The actual work done seems to have lain chiefly in observations with a view to obtaining more exact measurements of time and space. The credit of inventing a rude sundial is shared between Anaximander and Anaximenes. Eudemus, the pupil of Aristotle, whose history of geometry was alluded to in the last section, wrote also a history of astronomy, in which the inclination of the ecliptic was given as 24°, but it is not known who made this measurement. Pytheas of Massilia is said to have made observations on solstitial gnomons in various places, and to have concluded that Massilia and Byzantium are on the same parallel of latitude. Several other attempts at exact measurement are also recorded, but the chief interest lay in the estimation of the exact length of the solar year and the lunar month, and the invention of cycles in which the years and the months should finally coincide. The most celebrated of these cycles are those of Meton of Athens (*circa* 430 B.C.) and Callippus of Cyzicus (*circa* 330 B.C.). Meton calculated 19 solar years

= 235 lunar months = 6940 days. This cycle was found, by the time of Callippus, to be slightly erroneous. He therefore improved it by correcting the solar year to $365\frac{1}{4}$ days, and inventing a cycle of 76 solar years = 940 lunar months = 27,759 days. (This is merely the quadruple of Meton's cycle, less 1 day.) Observation of the stars led also to observation of the weather, and most of the weather-lore of antiquity is derived from the *Φαινόμενα*, a lost work of Eudoxus. There are some signs also of the study of mechanics. The lever and the wedge had been known from a very remote age. Archytas is said to have invented the screw (*κοχλίας*) and the pulley (*τροχιλαία*). Aristotle appears to have had some notion of the theory of the lever and of the parallelogram of velocities. Some very careful observations must also have been made in optics, for the architecture of the Parthenon and other temples shows many exact optical corrections, and there was sufficient interest in the subject to induce Euclid to write a book (still extant) about it. In the inductive sciences, apart from medicine, the chief work was done by Aristotle and his pupil Theophrastus, whose treatises on natural phenomena (*μετεωρολογικά*) and zoology and botany have come down to us. In these subjects very little further advance was made for about 1,800 years.

B. THE ALEXANDRIAN PERIOD.

282. Alexandria was founded, in B.C. 332, by Alexander the Great, who, in pursuance of his plan for breaking up nationalities, deported into it a mixed population of Egyptians, Greeks and Jews. On Alexander's death, it fell to the portion of Ptolemy Lagi (322 B.C.), who founded the famous library and schools. These continued to exist till the city was taken by the Arabs in A.D. 640, and almost every scientific man of any note in the intervening centuries either was a professor or had been a student in Alexandria. A rival school, with an excellent library, was founded by Eumenes II (*circa* 197 B.C.), in Pergamum, but this school was never distinguished for original research, except perhaps in medicine. The first *savants* whom Ptolemy invited to assist him were Demetrius Phalereus, a distinguished Athenian, and Euclid, whose native place is unknown. Demetrius was succeeded, in the management of the library, by Zenodotus, Callimachus, Eratosthenes, Apollonius, Aristophanes, Aristarchus. Of these, only Eratosthenes, a man of many talents, and Apollonius were distinguished in mathematical sciences. The rest were philologists, devoted to textual criticism, the preparation of commentaries and lexicons, and the determination of grammatical nomenclature. The first complete Greek grammar was written by Dionysius Thrax, a pupil of Aristarchus, about 120 B.C. The mathematical school founded by Euclid was continued by Conon of Samos, who added Berenice's Hair to the named constellations: Eratosthenes of Cyrene, who measured a geographical degree, and probably invented the four-year cycle that we now use with the Julian calendar: Apollonius of Perga, who exhausted the geometry of conic sections. In the second century B.C. the

best known mathematician is Hypsicles, who added a 14th Book (on the regular solids) to Euclid's Elements: but there were others, Nicomedes Diocles and Perseus, who wrote on various new curves, and Zenodorus who wrote on figures of equal periphery. Archimedes, the greatest mathematician of antiquity, lived in Syracuse (*ob.* 212 B.C.), but he corresponded with Conon and Eratosthenes, and there is other evidence which makes it probable that he was once a student of Alexandria. A large collection of his works is extant, comprising treatises on statics and hydrostatics, on a symbolism for very high numbers, on the quadrature of the circle and other curvilinear areas, and on the cubature of the sphere, the cylinder, and other solids. He was busy also with astronomy and with many ingenious mechanical contrivances, of which the water-screw is still in use. But the greatest astronomer, before the Christian era, was Hipparchus, and the greatest mechanical engineer was Heron, both of whom lived about 120 B.C. Hipparchus, who worked perhaps at Rhodes and not at Alexandria, is known to us from his commentary on the *Φαινόμενα* of Aratus and from many allusions to him in Ptolemy's *Almagest*. He invented among other things, trigonometry, both plane and spherical, the method of stereographic projection, and the method of determining the position of places by reference to latitude and longitude: and he discovered, among other things, and estimated very nearly, the precession of the equinoxes. Very little advance was made on his learning till the time of Copernicus and Kepler. Heron of Alexandria was perhaps an Egyptian by birth, but he wrote in Greek on arithmetic and mensuration, on the *dioptra*, a sort of theodolite, and its uses in civil engineering, on the simple machines (lever, wedge, screw, pulley and windlass), on engines of war and on many ingenious contrivances, mostly toys, in which the pressure of air or water was utilised. One of his inventions, now called Barker's mill, is still in use. After the first century B.C. only a few names are worth recording. Nicomachus of Gerasa and Theon of Smyrna wrote on the theory of numbers, in the Pythagorean manner. Serenus of Antissa (date unknown) and Menelaus (*temp.* Trajan) faintly adumbrated some of the most recent developments of geometry. Claudius Ptolemaeus, who certainly observed in Alexandria in A.D. 139, produced later the *Μεγάλη Σύνταξις* (afterwards called *Almagest* by the Arabs), the exposition of that famous astronomical theory which remained unchallenged for 1400 years. It contains, of course, incidentally a great deal of geometry and trigonometry; and Ptolemy's merits, as a mathematician, are thought by the best judges to entitle him to rank with Euclid, Archimedes and Apollonius. At the end of the next century (*circa* A.D. 300) lived Pappus of Alexandria, author of *Mathematical Collections* (*συναγωγή*), a professorial work of great interest, containing notes on all the mathematical books then studied. Theon, who edited Euclid, and his daughter, the famous Hypatia (*ob.* A.D. 415), are the last important mathematicians of the Alexandrian school. One only remains to be mentioned, Diophantus of Alexandria, a writer of uncertain date, who seems to belong to the third century. He is the author of a work

called *Ἀριθμητικά*, which is a series of exercises in the solution of algebraic equations. He does not say that his algebraic symbols were new or that he himself contributed anything to the methods that he uses, but the book is unique among Greek mathematical works, and Diophantus will always have the credit of being the inventor of algebra. The work in geography and cartography begun by Eratosthenes and Hipparchus was continued (though not in Alexandria) by Poseidonius (*circa* 80 B.C.), who had clear notions on tides; by Strabo (*circa* 20 B.C.) and others; and culminated in the celebrated map and index of Claudius Ptolemaeus, in which latitude and longitude were assigned (not correctly, of course) to every considerable place in the inhabited world. The Alexandrian school of medicine was admirably equipped, and remained, in the fourth century of our era, the most famous and fashionable. The study of medicine involved some study of botany and of the art of distillation (in the *ἀμβίκα*, whence *alembic*); but zoology remained where Aristotle left it. The fact is that the inductive and applied sciences, except in so far as they were ancillary to medicine, do not seem to have been subjects of the lecture-room but to have formed part of the traditional lore of the professions that required them. We can judge of their progress not by the aid of specific treatises but only by inference from isolated and incidental remarks of writers who are dealing with some other subject. The treatment of ores, for instance, and the making of alloys and of glass, perhaps led to some theory of heat and of chemical combination, but there is no extant work on these subjects; nor, though the Greeks were certainly acquainted with the magnet and with the electrical properties of amber, is there any evidence of a profounder study of these phenomena. Similarly, there are indications of some careful study of forestry, and Aelian's book (*circa* A.D. 150) is testimony to some continued interest in zoology; but the facts known are insufficient for the construction of a history, still less of a summary account, of progress in these sciences.

Abundant references will be found in the following works: (a) On the whole subject: S. Günther in Iwan von Müller's *Handbuch der Klass. Altertumswissensch.* Band v. Abth. 1. (b) On mathematics: G. Friedlein, *Die Zahlzeichen der Griech. u. Römer*; M. Cantor, *Vorlesungen über die Gesch. der Math.* Vol. I.; J. Gow, *Short History of Greek Mathematics*; J. G. Smyly on *Greek Arithmetic* in *Mélanges Nicole*; Sir T. L. Heath's full studies of *Diophantus*, *Euclid*, *Apollonius*, and *Archimedes*. (c) On Plato's Mathematics, B. Rothlauf, *Die Math. zu Platons Zeiten*; and S. H. Butcher in *Journal of Philology*, xvii. p. 219. (d) On Astronomy, R. Wolf, *Geschichte der Astronomie* and Sir T. L. Heath's *Aristarchus of Samos*. (e) On Geography, Sir E. H. Bunbury, *Ancient Geography*, and H. F. Tozer's smaller book with the same title. (f) On Mechanics and Physics, R. Poggendorff, *Geschichte der Physik*. (g) On Mineralogy, Lenz, *Mineralogie der alten Griechen*. (h) On Botany, E. Meyer, *Geschichte der Botanik*. (i) On Zoology, Corus, *Geschichte der Zoologie*, and Höfer's works in French on the history of the Sciences.

IV. ART.

IV. 1. PREHISTORIC ART.

283. OUR knowledge of Prehistoric Greece is comparatively recent. Schliemann, who worked from 1870-90, with his ardent faith in the historical basis of the Greek legends, gave us the first glimpse of early Greece and Asia Minor by his epoch-making excavations at Mycenae, Troy and other sites. Later the work of Sir Arthur Evans and of the Italians revealed in Crete, as Schliemann suspected, the beginnings and the centre of the so-called Mycenaean civilization. Following them a host of scholars have devoted themselves to the study of the origins of Greek art and civilization.

The history of Greek culture begins with the polished stone (neolithic) age, for no remains of the older stone (palaeolithic) period have yet been found. Since, as is only natural, the development of civilization in the Greek area was not uniform it is better to take the several districts separately. The districts in which prehistoric remains have been found are Crete, the Cyclades, South-Eastern Greece, North-Eastern Greece (Thessaly, Phocis, etc.), North-Western Greece (Elis, Aetolia, and the Ionian Isles) and the Trojan area. Of the material remains of the prehistoric period the pottery as a rule takes first place, because in most excavations more fragments of pottery are found than of any other class of object. For this reason the history of an inhabited site, if properly excavated, can usually be read in its pottery. The comparison of the pottery sequences from the different sites has made it possible for archaeologists to sketch broadly the main lines followed by the development of civilization in the Aegaeon basin.

284. At present little is known about the neolithic period in Crete and our principal knowledge is derived from the deposits below the foundations of the palaces at Cnossus and Phaestus. The earliest remains are those of coarse hand-made household vessels, basins, bowls and plates. They have wide mouths and simple flat bottoms; there are neither long narrow necks nor elaborate bases. The ware was polished by hand both within and without. Later, as some progress was made in the rudiments of civilization, this pottery was decorated with simple geometric patterns incised in the clay and filled with white

Crete.
Neolithic Age.

pigment. In pottery not so decorated a certain refinement was obtained during the polishing process by rippling the surface, which naturally increased the glitter of the burnishing. With this pottery figurines of clay or stone, tools such as polished stone axes (celts) and chisels, and bone pins and awls are found, while flakes of obsidian, imported from Melos, served as knives and razors. It is of course impossible to define the chronological limits of the neolithic period; all that is clear is that from about 3400 B.C. there was a gradual transition from the use of polished stone to bronze which began to be adopted for cutting instruments. But of course since bronze was rare and valuable the use of heavy stone hammers and axes and obsidian knives was not immediately abandoned.

285. The bronze age in Crete is divided by Sir Arthur Evans into three main periods which he calls Early, Middle and Late Minoan. Each of these is subdivided into three phases, Crete.
Early Minoan. Early Minoan I, II and III. These periods and phases give us an archaeological chronology for the finds in Crete and other finds related to them, and their approximate dates according to our era are shown in the table above (§ 115).

Little is known of the first phase of the Early Minoan period. The pottery is still of a primitive type. The heavy polishing and the decorative incisions of the neolithic period are abandoned; but the shapes of the vessels show more conscious design. We find vases with wide bodies and narrow necks, fitted with caps or lids and provided with small knobs so pierced that the vessels could be hung up. A goblet with a tall foot is also evidence of the same tendency towards more careful design, but in fabric all the vases are rough and hand-made. The first advance in technical skill seems, as often, to go hand-in-hand with a decrease in the desire for decorative effect. In the second phase of this period there first appears one of the two methods of painting pottery which were alternately dominant in the Cretan bronze age, the dark-on-light and the light-on-dark styles. The former, which is the earlier, is represented by vases with dark geometrical designs on a hand-polished buff ground. With this is found a peculiar type of ware covered with a hard paint of good quality which, owing to the firing, has a mottled surface varying in colour from orange-red to black. In the third phase this mottled ware still continues, but it is gradually replaced by a light-on-dark style in which geometrical patterns in white are applied to a ground of blackish glaze paint. Here spiral and curvilinear elements begin to appear in the designs. In all these fabrics the vases are on the whole well made and well designed, for there is a great variety of shapes, among which jugs with tall beaks and bowls with long side spouts are common. The last two phases also show a distinct and rather sudden advance in civilization. Typical of them are beautiful stone bowls which present a charming variety in material, size, design and colour. The skill and good taste which they show foreshadow the later artistic excellence of Minoan Crete. Much gold work in a simple

but delicate style has also been found. Sprays of leaves, pendants, beads, decorative strips, hairpins with daisy-shaped heads and similar ornaments in this metal occur in tombs and with them gems and beads in ivory, steatite, crystal and other precious stones. The use of bronze is attested by the discovery of short leaf-shaped daggers and double axes. Signs of the pictographic script are to be recognised on some seals of the period which are the earliest traces of any form of writing yet found in Greek lands and antedate the famous *σήματα λυγρά* of Homer (*Il. vi. 168*) by many centuries.

Since at the close of the neolithic age Crete had made no greater advance in civilization than any of her neighbours, one might well enquire how it was that she so soon outdistanced them. The answer is simple. The main impulse, which generated the Minoan culture, as evidenced by the difference between neolithic and Early Minoan Crete, undoubtedly came from pre-dynastic Egypt. The stone vases from Mochlos find their



Fig. 5. Polychrome vase of Middle Minoan II style.

best analogy in those from the tombs of Naqada, and it is possible that during the troubled times, which marked the beginning of dynastic Egypt, some of the older population, then expelled, may have settled in Crete.

286. In the Middle Minoan age the pottery again takes first place.

The dark-on-light style survives continuously, but is rare and latent, for the light-on-dark style is dominant.

This latter style culminates in the second phase with the beautiful polychrome cups of egg-shell fabric, some of which imitate metallic forms. The decoration, which is occasionally barbotine, is painted in white, yellow, cherry-red and deep red on a ground of black glaze paint. These light-on-dark polychrome wares—often known as Kamares from the scene of their first discovery—reach a very high level of artistic excellence both in technique and design (Fig. 5). The

patterns are mainly curvilinear, very often floral and strongly naturalistic. The fine fabric, the polychrome technique and the free and original naturalistic motives all combine to make this the most striking of all prehistoric wares. As might be expected from the refinement of the pottery this age, especially in the last two phases, shows a great progress in all the arts that increase the comfort or luxury of life. The architecture of the earlier part of the Middle Minoan age is represented by the first palaces at Cnossus and Phaestus which perished in a general catastrophe at the end of the second Middle Minoan period. To the succeeding phase (Middle Minoan III) belong the later palace at Phaestus and large parts of that at Cnossus, including the original plan of the domestic quarter. The walls of the palaces were adorned with brilliant polychrome frescoes. The charming painting of a boy gathering crocuses from Cnossus is the

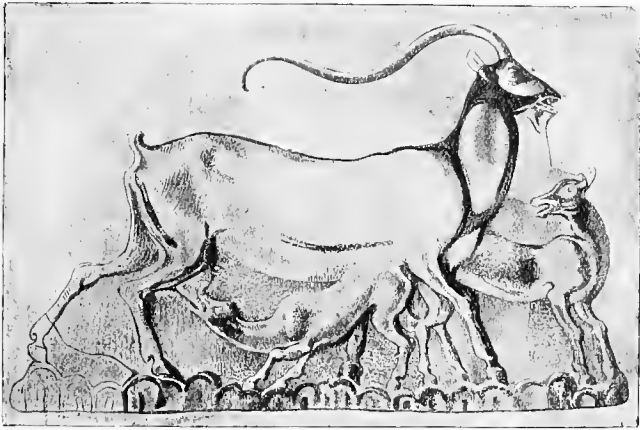


Fig. 6. Faience plaque from Cnossus.

earliest Middle Minoan (M. M. II) example. The use of hard stones for seals and gems becomes common and the designs have a naturalistic character, especially in the treatment of animals, and stone lamps and vases are found. In metal work a great advance is made. The bronze swords or rather elongated daggers are more workmanlike than those of the earlier period. Works in the precious metals are scarce, but a few specimens have been found (for instance a silver vase from Gournia), which give the metal prototypes of some of the egg-shell pottery. The workers of this and the Late Minoan period were trained craftsmen and almost all materials were alike in their skilled hands. Their work in ivory and crystal is as delicate as their work in paint. We have no examples of their modelling except perhaps the votive terracotta statuettes from a rustic sanctuary at Petsofa near Palaikastro. These, which fall in the first

phase of the period, with their quaint polychrome decoration, are important as showing the male and female costumes of the age. But the most remarkable objects are the faience figurines and plaques from the repositories of the palace shrine at Cnossus. The art of making faience was obviously learnt from Egypt, but it became firmly established in Crete. Moulds for making figures in faience have actually been found in the island, and the designs and technique are typically 'Minoan' and not Egyptian. The most striking of these figurines are the Snake Goddess (Fig. 140) and her votaries and other ritual objects, such as sea-shells, flying fish, flowers and fruit, belonging to her shrine. One plaque (Fig. 6) represents a wild goat with two kids. In its fresh and delicate naturalism it is unsurpassed by any monument even of the great age of Greek art. The Snake Goddess herself and a series of crocus buds are most realistically modelled with little if any regard for conventional artistic designs. Other objects in the same material include a large series of tesserae, perhaps intended to form a mosaic with crystal, representing the façades of houses, which are interesting as showing the types of the houses of the age. The script develops also and the pictographic signs become more and more conventional and from them arose a linear system.

287. In the first two phases (Late Minoan I and II) of the third and last period we reach the final climax of the greatness of Crete in art and culture. The style of the pottery changes from light-on-dark to dark-on-light. At first in Late Minoan I naturalistic patterns continue, and favourite designs include lilies, sprays of ivy and simple scrolls. Then marine motives come into fashion, and they prevail in the next phase. On the vases are represented rocks covered with waving sea-plants and among them are seen octopuses, sea-urchins, anemones, molluscs and various kinds of fish (Fig. 7). The decorated vessels are as a rule most elegantly designed, even the large store jars. Graceful jugs of an *aiguière* type and long fillers or strainers are two of the most characteristic shapes. Naturalism, however, was not confined to painting for the decoration of pottery; the art of fresco painting was also highly developed. The cat fresco from Hagia Triada is in this respect perhaps unsurpassed. This represents in a masterly manner a cat crawling stealthily through waving plants in order to spring upon an unsuspecting pheasant. Typical too are the cup-bearer and the portrait of a girl from Cnossus (Figs. 142, 143) which give us likenesses of the men and women of the mysterious 'Minoan' race which produced this civilization. Animation of style is shown in some scenes illustrating bull-baiting and one in which a number of fashionably dressed ladies of the court are attending some great function (Fig. 8). This belongs to a series of slightly *rococo* miniature frescoes, some of which are remarkable for their representations of shrines (cf. Fig. 22). In addition to the painting of figures in life-size, as in the great frescoes, we have similar figures in high relief in painted stucco and others in lower relief like the bull's head (Fig. 9)

Crete. Late
Minoan I, 11.

which represent the highest achievements of Minoan art. Fragmentary as the remains are, they give indications of groups and of friezes on a vast scale.



Fig. 7. Strainer of Late Minoan II style.

The knowledge of anatomy displayed would be wonderful in any age or country. Equally striking are the carved steatite bowls—originally probably



Fig. 8. Miniature frescoes from Cnossus.



Fig. 9. Bull's head in relief in painted stucco from Cnossus.

covered with gold-leaf—representing a harvest home, warriors, boxers and similar subjects. The low relief, the complexity of some of the scenes such as the harvest home, and the comparatively small size of the vases thus ornamented, combine to emphasize the skill of the artists in depicting such subjects in detail with strength and spirit. Well-carved bowls and lamps of stone prove that the lapidaries of the period were also accustomed to combine



Fig. 10. Ivory figurine from Cnossus.

practical utility with decorative art. More delicate are the ivory figurines from Cnossus and elsewhere with their graceful and flowing movement of the limbs (Fig. 10). For all their elegance they are full of strength, and the careful modelling of anatomical detail reflects the skill and observation of the artists. The making of faience continued in this period, but no striking examples have been found, and the terracotta statuettes, as for



Fig. 11. Seal impressions of Minotaurs from Zakro.

instance those from the shrine of the double axes, are rude and formal, characteristics perhaps due to religious convention. On the other hand

gem-cutting is on the same high level as the carving of the steatite bowls. Favourite motives, belonging to the transitional Middle Minoan III—Late Minoan I period, are fantastic animals such as the Minotaur types from Zakro (Fig. 11), and pairs of heraldic animals, especially lions (Fig. 12). Metal working is illustrated by the bronze bowls and ewer from Cnossus, also probably of the transitional period. As a *tour de force* of decorative workmanship mention must be made of the royal gaming board with its elaborate mosaic of crystal, ivory, gold, silver and blue glass-paste. Finally we may



Fig. 12. Seal impression with heraldic animals from Crete.

note that the pictographic script is definitely replaced by the linear signs which indicate a great advance in the art of writing.

288. At the end of the second Late Minoan period in Crete the palace of Cnossus was sacked and burnt, and the same fate overtook most of the other great centres of art and civilization in

Crete. Late Minoan III.

Crete. But in spite of this the culture of the next and last phase (Late Minoan III) is the same, for there is no break in its development, and the old sites continue to be inhabited. Yet as might be expected this phase, which is the period of the widest diffusion of Minoan and Mycenaean civilization, is artistically degenerate. The most representative group of objects are those found in the tombs of Cnossus. The

long bronze swords, often with delicately engraved decoration, show that the metal workers' skill was devoted to the arts of war as well as to those of peace. But the ivory plaques carved in low relief, the finely engraved gems, the gold jewellery and many other similar minor objects of art, indicate that the great Cretan tradition was still alive. Typical of this period are the terracotta sarcophagi painted with interesting scenes or symbols. The most important is the famous example from Hagia Triada which is of soft limestone covered with a thin coat of stucco. On this are painted ritual scenes. A terracotta specimen from Palaikastro is of the house type with a gabled roof and may have been influenced by wooden chests brought from Egypt. It is painted with various symbols, amongst which a double axe erected between the horns of consecration is conspicuous. Such sarcophagi show that the tradition of painting continued, but the pottery on the other hand shows the greatest degeneration. Here the dark-on-light style is preserved, but the fine marine designs of the previous phase have become stylized and conventional. The octopus is no longer treated naturalistically, but is converted into a conventional decorative pattern, and the same fate befalls lilies and other floral motives. The most typically shaped vase is the so-called stirrup vase or false-necked amphora, a round bodied vase of moderate size with a small narrow neck which is, however, closed at the top and so made false. Instead there is on one side on the shoulder of the vase a small circular projecting spout. Attached to the false neck on either side are loop handles which together have the appearance of a stirrup. Towards the end of the period another new shape appears, a wide two-handled crater which is characteristic of the final stages of Minoan culture. But though there was degeneration in art, yet the continued presence of the linear script shows that the practical side of the civilization still flourished. After this comes the period marked by the first introduction of iron, which had apparently been known for some time, and the beginnings of geometric pottery, which is at first strongly influenced by the shapes and the painted designs of the latest Minoan wares. But this is the beginning of the Iron Age, and since the prehistoric age may be said to end with the Bronze Age we have no concern with it here.

289. In the Cyclades little or nothing is known of the Stone Age and the history of civilization begins with the Bronze Age, which as far as we can judge seems to have been con- Cyclades,
temporaneous with that in Crete. But, while Crete is a large and fertile island, the Cyclades are small and on the whole have not sufficient soil to be fertile, for they are the tops of a primeval mountain chain now submerged in the Aegean. From this lack of natural advantages we should not expect the prehistoric culture of the Cyclades to be so flourishing as that of Crete. Melos and Thera, which seem to have reached a higher level than the others, are the nearest to Crete and possess natural volcanic products which were very valuable to primitive man. Melos is rich in

obsidian, which is the best material for making cutting tools when bronze is rare, and thus might be called the Sheffield of the Aegean. Naxos and Paros, two of the more fertile islands, are rich in marble and they consequently seem to have been more civilized than some of their neighbours. For the sake of convenience it is best to consider the Bronze Age in the Cyclades as divided into three periods, Early, Middle and Late Cycladic parallel with the corresponding Minoan period of Crete and having similar subdivisions.

In the Early Cycladic period the pottery is at first of a simple type made and polished by hand and decorated with elementary linear patterns incised in the clay. Then follows a dark-on-light painted ware with simple geometric designs in matt black, and the dark-on-light style remains dominant in the Cyclades, although from time to time we find attempts at a light-on-dark style. Of the early incised ware the most striking vases are those shaped like frying-pans, with elaborate

Cyclades.
Early Period.

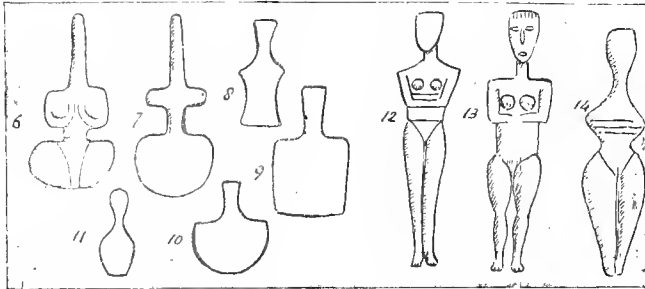


Fig. 13. Marble figurines from the Cyclades.

patterns of spirals, fish and primitive boats on the outside. Of the dark-on-light ware a common type at the end of the period is a tall jug with a beaked spout and two small breast-like projections on the upper part of the body. Some of the vases of this period, which are covered with a thin semi-lustrous paint shading from black to chestnut, may be akin to the mottled ware of Crete. But, as in Crete, the most striking objects of this period are the well made and polished marble bowls, some with tall bases and thin sides. With these are found small figurines, also of marble, which usually represent women (Fig. 13). Many of these are of the rudest type, being flat fiddle-shaped figures; others are definitely carved into the likeness of the human figure, but the legs are not separated (in all the arms are folded across the chest), and there are others of a more developed style, for the legs are separated and fairly well modelled. All the figures however are flat and the heads are elongated with only a rough representation of a face. In addition there are a few exceptional specimens such as those of men playing a double flute or

seated on a stool playing harps. Though all are very primitive, yet the obvious attempts in some cases at delicate modelling and the clear desire of the maker to find expression in a material, which was not yet thoroughly mastered, are exceedingly interesting, for these are the earliest examples of marble sculpture found on Greek soil. Bronze was scarce and is represented only by a few small knives, chisels and double-edged axes, but lead seems to have been known, for models of boats in this metal have been found. Of gems there are a few rudely cut examples in steatite and other soft stones, and gold work is rare and of the most elementary type.

290. In the Middle Cycladic period the islands fall definitely under the influence of Crete. The native dark-on-light style continues and curvilinear designs, which began to appear at the end of the last period, now become common. The tall beaked jugs and small cups with decoration confined to a panel on the front are typical shapes, as well as low shallow bowls with a small spout. But, as the islands came under the influence of Crete, the native potters began to imitate the naturalistic designs of Middle Minoan ware, and lilies, crocuses and other floral motives were popular. Further in Melos, at the very end of the period, vases occur with well drawn floral patterns in red-brown and black, in imitation of the polychrome Middle Minoan ware, and many of these, except for the inferior technique, almost deserve to rank with the best products of Crete. The native clay, especially in Melos, is soft and porous, and ill-adapted for fine pottery or good painting. With these local fabrics are found many specimens of the typical light-on-dark ware of Crete, and *vice versa* some Melian jugs have been found in the temple repositories at Cnossus, and the close relations between Crete and Melos are thus demonstrated. During this period there are also found in Melos specimens of another ware usually known as Minyan. It is wheel-made of grey clay with a characteristically smooth soapy surface. To this ware, which occurs from Middle Cycladic II to Late Cycladic II, we shall return below. Lack of material makes it impossible to attempt to estimate the advance in culture made in other respects, but the pottery is enough to show that for artistic taste and a true appreciation of nature the Cyclades were worthy neighbours of Crete.

Cyclades.
Middle Period.

291. In the first two phases of the Late Cycladic period the same dependence on Crete is noticeable in the pottery, in fact if anything it is even more marked, for the best productions of the Melian potters are imitations of Late Minoan I and II vases. A bronze statuette from Phylakopi in Melos and some fragments of ivory point in the same direction. Lastly, the painted frescoes found in the ruins of the earlier palace at Phylakopi, especially the splendid example of the flying fish (Fig. 14) with its brilliant colouring and fine naturalism, almost force us to conclude that they were made by Cretan artists. In the last phase of this period a change comes over the scene. The destruction of the Cretan palaces seems to have coincided with

Cyclades.
Late Period.

the overthrow of Cretan supremacy in the islands, for in place of Cretan wares we find Mycenaean pottery imported from the mainland of Greece, probably from Argolis. Similarly the local wares, which naturally still continue, are imitated from Mycenaean and not from Cretan examples. Minor objects of art are not common except seal stones bearing the usual Minoan or Mycenaean devices, and in Melos at least the artistic tradition which produced these gems seems to have lasted through the early Iron Age into the first phase of archaic Greek art. The end of the Bronze Age in the Cyclades is marked by some great disturbance which overthrew the old seats of civilization although it did not entirely destroy the tradition they followed. The city at Phylakopi was destroyed at the end



Fig. 14. Fresco of flying fish from Phylakopi.

of this period and never again inhabited, and the centre of life in Melos was transferred to the site of the classical city.

292. For the early archaeological history of South-Eastern Greece little evidence has yet been found which is older than the Late Minoan period. Some isolated finds of stone implements in the Peloponnese show that the land was inhabited in the Neolithic Age. But even for the early Bronze Age in that region the available evidence is insufficient. In the lower strata at Tiryns below the Mycenaean palaces is found a hand-made ware covered with a thin semi-lustrous paint that resembles the Cycladic fabric already noted and the mottled ware of Crete. This ware, which is known by its German name of *Urfirnis*, has also been found in the second stratum at the Boeotian

South-
Eastern
Greece.

Orchomenus and in the Spercheus valley. But in both cases it lies above an earlier layer containing neolithic pottery similar to that common in the first period in Thessaly. Thus it seems that the people of South-Eastern Greece, under pressure perhaps from still further south, extended their influence over certain districts of Central Greece. When this took place we cannot say with any certainty, but it possibly occurred during the Middle Minoan age. The great age of South-Eastern Greece in prehistoric times begins with the establishment of Cretan influence on the mainland in Argolis and the adjoining districts. This was apparently at the end of the Middle Minoan age, for a few samples of the polychrome light-on-dark ware have been found at Tiryns and Mycenae. These, though in the style of Middle Minoan III or Late Minoan I, do not seem to be of Cretan fabric, and it seems therefore that the mainland folk, like the islanders, began at a comparatively early date to imitate the products of Crete. The Cretan culture quickly took firm hold of the mainland where its principal focus was in Argolis, and it also flourished in Attica, Boeotia, Laconia and Triphylia. But though the Mycenaean art of the mainland ultimately depends on Crete and progresses on similar and parallel lines, yet its development seems to have been independent. The mainland frescoes can be differentiated from those of Crete, and the script, though of Cretan origin, differs from the contemporary type in Crete.

293. For the sake of convenience we may divide the period of Mycenaean culture on the mainland into three phases, Mycenaean I, II and III, corresponding with the three subdivisions of the Late Minoan period in Crete. For the first two phases the most important finds are those from the shaft graves at Mycenae and from the beehive tombs at Vaphio in Laconia and the Triphylian Pylos. The pottery presents exactly the same characteristics as that of the corresponding period in Crete, and there is the same love of naturalistic floral and marine motives (Fig. 15). The differences to be observed are those of quality, especially in the clay and the paint, rather than those of style. Fresco-painting is represented by some fragments from Mycenae and Tiryns, and one from the former site, showing a group of court ladies looking out of an upper window, recalls the miniature frescoes of Cnossus. Bronze work is plentiful; there are the huge bronze pots and bowls from Mycenae and the splendid series of long swords. The blades of the latter are often engraved and their hilts are made of ivory, gold and inlaid work. The dagger blades inlaid with designs in different metals such as gold and silver, show how high a point had been reached by the Mycenaean metal workers. One scene represents panthers hunting aquatic birds on the banks of a stream full of fish and edged with lotus. On another hunters armed with spears and protected by large shields are seen attacking three huge lions. Gold work is exceedingly plentiful; there are thin discs adorned with the nautilus, cuttle fish or bees, personal ornaments such as hairpins, some with elaborate heads

First and
Second
Phases.



Fig. 15. Reconstructed Vase of second Mycenaean period from Mycenae.

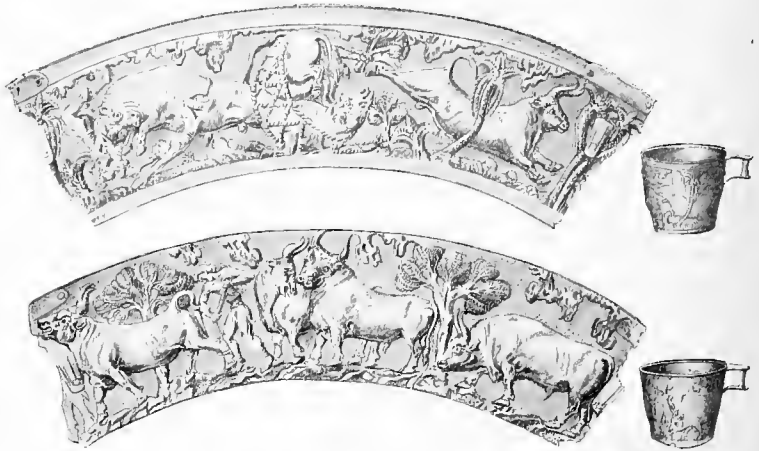


Fig. 16. The gold cups from Vaphio in Laconia.

representing a lady beneath a palm tree, and thin plates decorated with spiral and lily patterns used to encase wooden boxes. In all this work motives drawn from nature are usually employed for decorative purposes. Of the gold cups and vases mention can only be made of the two famous specimens from Vaphio (Fig. 16). The scenes on these show men engaged in catching wild bulls, probably for the bull-baiting sports of which we have evidence in the frescoes of Cnossus and Tiryns. The spirit and strength of the design and the naturalistic execution, in spite of the primitive perspective, make these cups the masterpieces of prehistoric art. So like are they to Cretan work that it is possible that they may have been made in Crete and imported into Laconia. The siege scene on the silver vase from Mycenae shows that metal chasing was not confined to gold. Here we see a band of slingers and archers posted on broken ground below a city wall defending themselves with desperation, while on the walls a group of women is seen encouraging them to further efforts. There is also



Fig. 17. Gold ring from Mycenae.

a graceful flagon of silver and a bull's head of the same metal with horns of gold. Perhaps the most remarkable piece of Mycenaean goldsmith's work is the ring representing a cult scene (Fig. 17). On this is seen the goddess of the double axe, which is placed near her, seated under her sacred tree receiving women who come to bring her offerings. In the sky above are the sun and the crescent moon. The exquisite work on such a small scale, the detail of the women's costumes and the interest of the cult scene render this one of the most interesting of the treasures of Mycenae. The gems and sealstones show the same tendencies as the contemporary specimens from Crete. One or two rings of iron indicate that this metal was known but precious; and there are minor objects of art in crystal, faience and amethyst. This latter material and objects in ivory and ostrich eggs point to trade relations with the East and Egypt; while on the other hand amber beads show contact with

Central Europe. In sculpture in hard stone the artists of Mycenae were not so skilled; the Lion Gate is imposing by its size and rough vigour, and the ceiling from Orchomenus and the door of the treasury of Atreus are excellent, but merely decorative. Lastly, the low relief of the tombstones from Mycenae, if they belong to this period, is rude and lacking in strength.

294. In the last phase of the Mycenaean power its culture spread generally over the greater part of continental Greece. **Last Phase.** Thessaly for instance and the Ionian Islands were now definitely brought within its sphere, and far eastern islands such as Rhodes and Cyprus seem to have been flourishing centres of civilization. In the



Fig. 18. Scene on the Warrior Vase from Mycenae.

material objects themselves there is little change except that the *rococo* element grows stronger and there is, as in Crete, a distinct artistic degeneration. In the pottery the fine designs of the preceding period become meaningless and conventional. The tall kylix and the stirrup vase are the common shapes and, as in Crete, at the very end of the period, in what might almost be called a sub-Mycenaean age, the wide two-handled crater makes its appearance. This becomes the most prominent type of vase and is often decorated with scenes representing men and animals. Chieftains driving chariots, warriors, as on the famous vase from Mycenae (Fig. 18), and large birds are common patterns. But the quality of the

paint and the technique are inferior to the vases of the previous period. Pottery was no longer an art, but an industry. The female terracotta figurines are rude and primitive in modelling, with their bird-like faces and with horn-like projections for arms. In contrast to the pottery the frescoes still show good work; the procession of women and the spirited boar hunt from Tiryns fully maintain the traditions of earlier periods in their boldness and their observation of nature. Ornaments of gold are common, but in many instances gold work is replaced by cheap ornaments in blue-glass paste, covered with thin gold leaf. Amber beads and sealstones carved with facile, but roughly executed designs, are frequent. Ivory, however, is more in evidence than before: the tombs at Menidi and Spata in Attica have

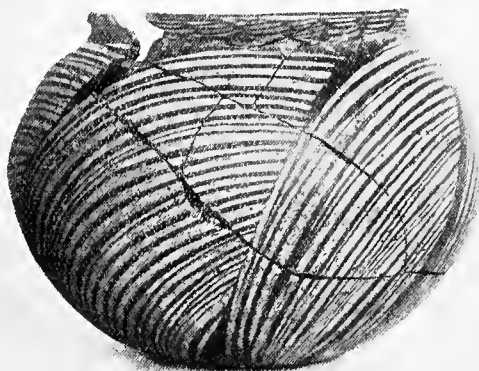


Fig. 19. Vase of red on white ware from the Spercheus valley.

yielded innumerable plaques and other objects of ivory carved with many different designs, especially lions and sphinxes. Bronze weapons were still commonly in use, but towards the end of the period weapons of iron are found and also *fibulae* of bronze. This is the first appearance of the safety-pin brooch which is so typical an object in the archaic period of Greek art. Late groups of tombs, such as those from Salamis and isolated finds of a similar character, show that after the Mycenaean power was overthrown, most probably by an invasion from the north, the degenerate Mycenaean culture passed gradually into that of the early Iron Age, marked by the introduction of geometric pottery.

295. In North-Eastern Greece we have more evidence for the Neolithic Age than in other districts of the mainland. But this is due

North-
Eastern
Greece.

merely to the fact that in Thessaly the Stone Age lasted on after most of the rest of Greece was already in the Bronze Age. This was probably caused by the isolation of Thessaly, which seems to have been surrounded by a forest belt. The Prehistoric Age in Thessaly may be divided into four periods; the first and second are Neolithic, the third is the transition from the Stone to the Bronze Age, and the fourth, which is approximately contemporary with the three Mycenaean periods, is the full Bronze Age. In the first Neolithic Period the remains of the rude hamlets which are found about the plains of Thessaly, Phocis and Boeotia, are characterized by an abundance of good hand-made ware with rather elaborate linear designs in red on a white ground (Fig. 19). There are many local varieties of this ware, but its essential features remain the same throughout the whole region. Some of the pottery, especially a plain red ware, is thin, well made, and highly polished. With it are found stone implements of the usual types, axes, hammers and chisels, and pins and awls of bone. The only sign of contact with the outside world is shown by the presence of knives and flakes of Melian obsidian. The statuettes, which are usually female, although primitive and steatopygous,

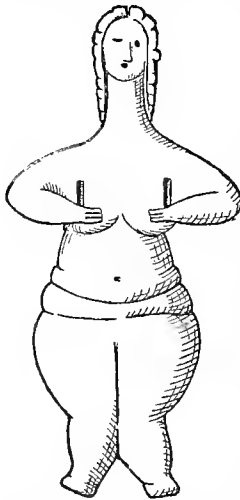


Fig. 20. Reconstructed drawing of steatopygous statuette from Thessaly.

by their painted decoration and rude modelling indicate a desire to render the human form (Fig. 20). The presence of cereals in some of the settlements and the bones of sheep and the antlers of deer, show that the people lived a simple agricultural and pastoral life, varied by the pleasures of the chase. The culture of the Second Thessalian Period is confined to the regions north of Mt Othrys, for Phocis and Boeotia seem to have been overrun by the more advanced people of South-Eastern Greece. The original inhabitants do not seem to have been entirely driven out, for in Phocis and even as far south as Corinth, pottery typical of the second and third Thessalian periods has been found. In Thessaly itself the culture is no longer as uniform as in the first period. In Eastern Thessaly a new class of pottery appears, which may perhaps have been brought in from still further to the north-east. This is decorated in a wonderful manner with elaborate patterns, comprising both linear and spiral elements, painted in dark brown on a cream ground. The vases, which are well polished and of a simple open

type, are not of quite so good a fabric as the earlier wares. In Western Thessaly the pottery shows by its patterns that it is developed from the red

on white ware, but is now usually painted in brown-black on a polished ground that varies from red to buff. But in both regions the most striking vases are those decorated with geometrical and curvilinear designs in brown-black and orange-red on a cream ground. Apart however from the changes in the pottery, the character of the culture seems to have remained much the same. The Third Period is marked by a distinct artistic degeneration, for the bulk of the pottery is coarse and unpainted. A monochrome black polished ware, often decorated with simple geometric patterns in white or with incisions, makes its appearance and some of this ware is well made. There are also many vases of a coarse fabric which are painted or rather crusted with thick and dusty-white or pink paint. The technique is unsatisfactory, but some of the spiral patterns are rather elaborate. The same degeneration is visible in the terracotta statuettes. These have long flat stone heads painted with rude representations of a human face, tapering to points which are inserted in formless bodies of clay. A few figurines all of stone have also been found, which, however, are not so rude as the acrolithic figurines. In this period the use of bronze seems to have been first introduced, though few actual traces of it have been discovered. In the Fourth Period the degeneration of the local culture is even more apparent, for the pottery is very coarse, thick and rough, so that an advance in technical skill shown by the introduction of bronze is accompanied by an artistic decline. Two male seated figurines in terracotta show improvement in modelling, for their execution, though rough, is not without spirit (Fig. 21). But now for the first time we have definite signs of outside influence at work in Thessaly. Hitherto the only signs have been the Melian obsidian and a few sherds of *Urfirnis* ware from the south-east. The beehive tomb at Kapakli near Iolcos has yielded pottery, gold work and similar objects of the second Mycenaean period, and there are other examples from tombs at Pagasae and in Perrhaebia. In the Third Mycenaean Period towards the end of the Fourth Thessalian Period the Mycenaean culture spread thinly all over Thessaly, but without displacing the old local culture, which continued in a degenerate form. This invasion of the Mycenaean culture and perhaps the intrusion of some geometric type of ware from the north-west combined with the local tradition to produce a geometric style of pottery of a peculiar character. Wares of a similar character are found also in Attica,



Fig. 21. Terracotta statuette from Thessaly (Fourth Period).

the Cyclades, Argolis and Crete, and apparently mark the transition from the Bronze to the Iron Age.

With the Mycenaean objects there is also found a large amount of the fine grey wheel-made ware called Minyan. This is the typical ware at Orchomenus in the third stratum, which is very thick. Its presence there is perhaps contemporaneous with its first appearance at Melos in Middle Cycladic II. So much has been found at Orchomenus that we may consider it the centre of this ware on the Greek mainland. That found in Thessaly falls into two classes, firstly, proper Minyan ware imported from Orchomenus or elsewhere, secondly, local Thessalian imitations. This ware occurs in the cist graves at Dimeni and other sites, which contain in addition bronze weapons and some simple jewellery in gold and silver. These graves seem to be of about the same date as the two beehive tombs at Dimeni, which yielded rich finds of the third Mycenaean period. Thus as regards the development of art and civilization Thessaly stands apart and seems to have been isolated till the Mycenaean age.

296. North-Western Greece seems to have had a similar fate. In Leucas painted neolithic pottery, perhaps akin to the Thessalian, has been found. All the other finds are of the latest Mycenaean period, except those from the beehive tombs at the Triphylian Pylos, which are of the Second Mycenaean

North-
Western
Greece.

Period. In places such as Cephallenia and Leucas and even in Acarnania and Aetolia the Mycenaean culture which was spreading northwards by coastwise routes, did not displace the local cultures, but came amongst them as the product of a far higher civilization. But the true meaning of the finds in this region cannot be understood till much more excavation has taken place there.

297. The only other prehistoric finds that remain for consideration are those from the Trojan area. These are of less importance for our purpose than those from Greece, for Troy is not a

Trojan area.

Greek but an Asiatic city. Except in its last two phases the prehistoric Trojan culture seems to have remained outside the sphere of the Aegaeon civilization and its nearest analogies are to be found in Phrygia. The first city at Troy, whose date lies between 3000 and 2500 B.C., belonged to the early Bronze Age. The walls of the houses are rudely built of small stones and the pottery is of a rough fabric decorated with incised lines. The second city, which dates from the second half of the third millennium B.C., was much more imposing, and to judge from the evidence of buildings, which had undergone alterations, was in existence for a long time. The fortifications are strong and the walls of the houses consist of mud, brick and timber, laid on a foundation of stones, thus showing a striking resemblance to early Greek architecture. There need, however, be no connection, for all the world over the earliest efforts of man in such things are similar. In this city much pottery was found, and some of the vases were made to resemble the female figure with quaint faces, breasts and rough arms.

Bronze was in common use as is shown by the finds not only of bronze vessels, knives and axes, but also of moulds for casting them. The figurines in stone are flat and shapeless, with owl-like faces; and the culture of this city, apart from the richly decorated axes and the gold work, does not seem to show a very high stage of art. The gold and silver vases of the great treasure, called by Schliemann Priam's Treasure, if it does belong to this city (for there is some doubt on the point), shows in some of its spiral ornamentation on bracelets, hairpins and the like, a resemblance to early Mycenaean work. This might point to trade relations with the Aegaeon, but otherwise there is little or nothing to connect Troy at this period with Greece, for other objects such as pottery and knives of Cypriote type and the famous axe of white jade point to relations with the east. Further, the material used for arrowheads and small knives is flint and not Melian obsidian, and the ordinary pottery finds its nearest analogies in Phrygia. The fourth and fifth settlements at Troy were small and of no importance. To them succeeded the sixth city, which was fortified with strong walls well built of worked stone and was contemporaneous with the end of the Mycenaean age, as is indicated by the finding of vases in the style of the last two Mycenaean phases. But the typical culture of Troy is not Mycenaean. The bulk of the pottery is of local manufacture and prominent amongst it are a number of vases of the fine, wheel-made, grey fabric called Minyan ware. If, as has been suggested, this ware might be called the typical ware of Troy, then its presence at Mycenae, Eleusis, Orchomenus, Melos and other centres in Greece would point to Hellespontine influence in prehistoric Greece. Further, two of the gold cups from the fourth shaft grave at Mycenae are of a type that might be called Trojan. The seventh city stands at the beginning of the Iron Age, and in this together with much Minyan ware and other pottery were found a number of weapons, especially axes of bronze which have a striking likeness to finds from Servia and the Danubian area, and such finds may possibly reflect the Thracio-Phrygian invasion.

298. There is little that is striking in the architecture of prehistoric Greece, for, as might be expected, so technical an art remained in rather a primitive condition. The most interesting remains are those of the great palaces at Cnossus and other sites in Crete and at Tiryns and other mainland sites, and those of the houses in the different regions. These will be found described briefly in Ch. vii. 8.

Architecture.

Prehistoric temples or shrines do not exist except for the double axes at Cnossus, which is a small chamber six feet seven inches long by four feet eleven inches wide. The so-called temple in the sixth city at Troy, if it is a temple, is Asiatic and not Greek. But some fragmentary frescoes from Cnossus (Fig. 22), together with a gold model from the fourth shaft grave at Mycenae, give us the probable appearance of the façade of a Minoan

Temples and Shrines.

temple. There is a high foundation of good masonry, on which stands the shrine itself with three portals. It seems that the temple consisted of a main chamber with smaller chambers as wings on either side; an arrangement that recalls that of Etruscan temples as described by Vitruvius. The roof was flat, but in the model an altar of the typical Minoan type is seen above the central portal. In each of the chambers and visible through the open doorways are baetylic pillars with the horns of consecration. But the buildings shown in these illustrations do not seem to have been large and should perhaps be called shrines rather than temples. The foundations of a shrine similar to that shown in the reconstructed fresco (Fig. 22) have

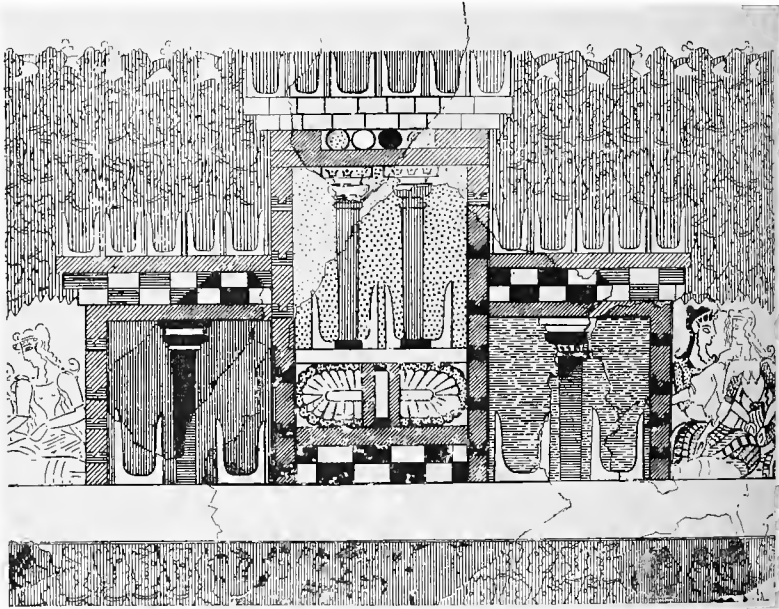


Fig. 22. Reconstructed drawing of Minoan shrine on a fragment of fresco from Cnossus.

been recognised on the west side of the central court at Cnossus, and in this the wings were open. Completer knowledge of Minoan shrines and temples can only be obtained by the finding of the actual remains of more such buildings.

299. The wall of the cities do not show any particular features unlike those of early fortifications elsewhere. The only exceptions are the great underground galleries in the thickness of the walls at Tiryns with a series of side chambers attached, which were probably used as storerooms. The walls show a variety of styles; the Cyclopean style with huge blocks of stone roughly fitted together, ashlar work with

blocks hewn into a more or less rectangular shape, and lastly polygonal work, in which the stones are cut into irregular polygons and fitted neatly together. The portions of the walls of Mycenae which were built in this style need not necessarily be prehistoric, for Mycenae existed till the fifth century and the polygonal style is found in walls of the early classical period. The ashlar work is seen at its best in the walls of the great Cretan palaces, where the friable gypsum is used for covered walls and limestone for walls exposed to weather. Both Mycenae and Tiryns have two gates, a main entrance and a small postern. The main gate at Tiryns is set obliquely so that those who approach it have the wall on their right or shieldless sides. At Mycenae the approach to the Lion Gate has the city wall on the left, and on the right just in front of the gate a strong bastion is thrown out to help to guard the entrance. This has the effect that anyone who attacked the gate would find himself enclosed in a small court barely thirteen feet square and exposed on three sides to missiles from the citadel. The Lion Gate itself is slightly over ten feet high and between nine and ten feet wide. The sockets for the double gates are still visible in the threshold, and behind the gates a strong wooden beam ran into sockets in the gate-posts. The gate is roofed with a massive lintel and over the centre is a triangular relieving space to lighten the weight on the lintel, which is filled with the lion relief. The postern gate is built on the same principle, but there is no relieving space over the lintel because the gate is barely six feet wide. At Troy the walls of the sixth city have a scarped substructure six to seven feet high to carry the perpendicular upper walls. Three gates can be made out clearly: two of these are on the same principle as the Lion Gate, and the third runs at right angles through the wall with a big square tower overlooking it on the left. The large square towers at Troy, of which three can be seen clearly, are a feature which has so far not been recognised at Tiryns, Mycenae, or any other Mycenaean site.

300. The most remarkable monuments of prehistoric architecture in Greece are the beehive tombs of the Minoan and Mycenaean civilization. The three best examples are the tomb at Isopata near Cnossus, the so-called Treasury of Atreus at Mycenae, and the tomb at Orchomenus. These tombs are built in an excavation cut in a sloping hillside, so that the tomb proper must be approached by a cutting which runs straight into the hill. The Treasury of Atreus is the best preserved (Fig. 23). The approach is twenty feet wide and one hundred and fifteen feet long, and at the door of the tomb the depth of the cutting, which is faced with ashlar masonry, is about forty-five feet. The door of the tomb is twenty feet wide, is three inches short of eighteen feet high, and in width varies from eight feet nine inches at the bottom to eight feet one inch at the top. The lintel is composed of two gigantic slabs (29 ft. 6 by 16 ft. 6 by 3 ft. 4) which are estimated to weigh one hundred and twenty tons. Over the lintel is the usual triangular relieving space, once filled with ornamental slabs of reddish

Beehive
Tombs.

stone, and before the door on either side stood two columns of green marble richly carved with zigzag and spiral patterns. The columns, which like all Mycenaean columns are thinner at the bottom than the top, rest on simple square plinths. At the top is a capital also richly carved and of a simple torus shape separated from the shaft by a neck ornamented with a lotus leaf pattern. Above the columns there seems to have been a cornice of alabaster slabs. The door was double, to judge by the socket holes still visible. Within is a great chamber shaped like a beehive, fifty feet high and formed of thirty-three horizontal courses. Each of these courses is a circle superposed one upon another corbel fashion. Bronze nails in the interstices of the courses show that the walls were once decorated with

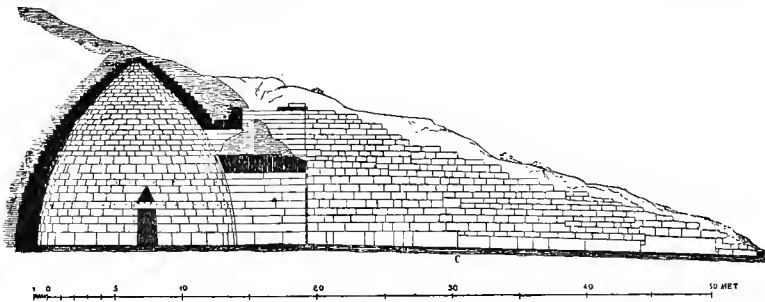


Fig. 23. Section of the Treasury of Atreus at Mycenae.

rosettes or similar ornaments in bronze. The tomb proper is a square rock-hewn room, once lined with masonry and alabaster and connected with the beehive by a double door about ten feet high. A pit in the floor of this side chamber was probably the burial place. The wonderful stone ceiling from Orchomenus, with its beautiful decoration of spirals and rosettes, was the roof of the square side chamber of the tomb. But such side chambers are not a constant feature and seem only to occur in the larger and more elaborate examples. In others the interments seem to have taken place in pit graves in the floor of the beehive.

Boyd-Hawes, *Crete the Forerunner of Greece; Gourmia*. British School at Athens, *Phylakopi*. Bulle, *Orchomenos*. Burrows, *Discoveries in Crete*, 3rd ed.* Dörpfeld, *Troja und Ilion; Briefe aus Leukas-Ithaka*. Dussaud, *Les civilisations préhelléniques*, 2nd ed. Evans, *Excavations at Knossos* (B.S.A. Vol. VI. and subsequent volumes); *Mycenaean Tree and Pillar Cult; The Prehistoric Tombs of Knossos; The Nine Minoan Periods*.* Forsdyke, *The Pottery called Minyan Ware* (Journal of Hellenic Studies, 1914). Halbherr, Pernier and others, *Scavi della Missione Italiana* (Mon. Ant. Vol. XII. ff.). Hall, *Aegean Archaeology*.* Schliemann, *Mycenae; Tiryns*. Schuchhardt, *Schliemann's Excavations*. Seager, *Explorations in the Island of Mochlos*. Tsountas and Manatt, *The Mycenaean Age*, 2nd ed.* Wace and Thompson, *Prehistoric Thessaly*.

*Books marked * were not published at the time this article was written.*

IV. 2. ARCHITECTURE.

[For prehistoric architecture see §§ 298 ff.]

301. The later and more complete architecture was to a great extent evolved from the works of the primitive period. The Greek genius was indeed ever ready to adopt new ideas, yet when once a recognised type had been formed, the new ideas were brought into harmony with the old: for instance, the stone architecture of the Greeks demonstrates to a very great extent that its decorative features were founded upon the type of wooden construction. That they recognised this fact themselves is evident from Vitruvius (iv. 2), who drew his information, as he continually tells us, from Greek sources—but it is also capable of being proved from modern investigations. The Lycian tombs, and some which have lately been discovered in Cyprus, show in the plainest manner that forms proper only to timber have been copied by way of ornament in stone. This imitation can be followed through the whole of the entablature, that is, the upper horizontal members of a Greek façade of the complete period. It can hardly be doubted that the timber type grew out of the real construction of this primitive period. Not only do the columns and entablature prove this, but it may also be seen in the wooden casing provided for doors, etc., even in marble buildings of the fifth century, a survival from the time when inferior materials, such as unbaked brick, made such an arrangement necessary. The extensive use of terracotta facing in Greece and Sicily, sometimes even on stone buildings, is evidently derived from a wooden structure.

Survival of
the wooden
type.

302. The Dorian immigration, traditionally attributed to the eleventh century B.C., introduced many new elements into Greek architecture, especially, in all probability, the gable form of roof; the Mycenaean buildings seem to have been flat-roofed. But other elements of the Doric order seem to be influenced by Mycenaean models. The date of the earliest Doric buildings has not indeed been determined, but it was probably subsequent to the Dorian invasion of the Peloponnesus. It may also be affirmed that on the whole this species of architecture largely prevailed in the colonies attributed to the Dorians, whilst the rival and contemporary Ionic order was the favourite on the eastern side of the Aegean. There were, however, sufficiently numerous exceptions to prove that these two orders did not show an absolute line of demarcation between the states of Dorian and Ionian extraction. The earliest Doric building in Greece is the Heraeum at Olympia. Its walls are an example of the Mycenaean practice of building only the lower portion of the wall in stone, and the upper of mud-brick and timber. In its colonnade we can trace the gradual

Development
of Doric
order.

substitution of stone columns for the wooden tree-trunks that had originally served the same purpose; for the varying sizes of the shafts and profiles of the capitals show that they were set up in succession, at considerable intervals of time. In the Opisthodomus, Pausanias records that one of the columns was of oak—doubtless the last survivor of the original wooden ones.

The earliest Doric columns are fluted, as were also the stone columns at Mycenae. The origin both of this practice, and of the essential form of the column, is very obscure. The column is made extremely effective both structurally and aesthetically, by the contrivance of a projecting abacus connected with the circular shaft of the column by a conoidal echinus. The profile of this echinus is bulging, almost bowl-shaped, in early examples, and gradually becomes flatter, with so great regularity of development that a temple can be approximately dated from it. The shaft of the column diminishes upwards, in contrast to Mycenaean examples which diminish downwards. Even in the earliest examples which have been discovered it is found to be a very accurate conic section, elliptical or sometimes parabolic in the earlier, and hyperbolic in the later and more refined examples.

303. Another beautiful refinement is the very slightly curved outline of the shaft called the *ἐντασις*. This is found even in the earliest Doric columns now standing in the temple of Corinth, which date probably from the sixth century B.C. There are, however, remains of fallen columns probably of a still earlier date, from which by careful measurement the existence of an entasis can be deduced. The Doric order at its first introduction was very solid, both as regards the shaft of the column and the proportionate height of the entablature; but it gradually became more slender. The height of the Doric columns of the temple at Corinth was about three and a quarter times the breadth of the abacus and four and a quarter times the diameter of the shaft at its base: in the Parthenon the height was five times the breadth of the abacus and five and a half times the diameter of the shaft. So long as it retained its massive character the simplicity of its details harmonized admirably with the general effect. The long series of refinements, culminating in the Parthenon, which is by overwhelming authority admitted to have exhibited the highest rank of architectural achievement took place before it lost the qualities for which it is most admired; but when afterwards it became attenuated, not only in the slenderness of the column but also in the massiveness of the capital, as in the Portico of Philip in the island of Delos, and some other late examples, the result no longer satisfied the eye, and the order was found to be ineffective and ill-adapted for the recovery of what it had lost in dignity of form by the introduction of further enrichment. In many early temples the wooden entablature was covered by painted terracotta mouldings, of which many beautiful specimens have been found in Sicily, at Olympia, and elsewhere.

Refinements
in the Doric
order.

304. There is no reason to suppose that the Ionic order was developed later in time than the Doric. It has this much in common with the Doric, that the entablature exhibits a wooden origin. The most conspicuous early remains are those of the huge temple of Hera, at Samos, and those of the equally huge early temple of Artemis, at Ephesus, but these enormous temples had many precursors of smaller size; and it is not unreasonable to hope that when circumstances shall allow of the investigation of sites in the Turkish provinces as complete as has taken place in Greece and the Grecian sites in Italy, more of these earlier essays may be found. Unlike the Doric, there is no evidence that the Ionic column of the earliest examples was more massive than those of later times. In Ionic columns of early period the height is ten times the diameter. The origin of the Ionic capital has been much discussed. Dr Puchstein, in his treatise on the Ionic capital, points out that while volute capitals are known in Assyrian and other oriental architecture and decoration, the essential feature of the Ionic order, the combination of the volute with a cymatium or torus, belongs exclusively to Greece. And from whatever quarter its elements were derived, its extreme elegance was due to its treatment at the hands of the Ionian Greeks. The peculiarity of the Ionic fluting is the adjustment of a fillet separating the flutes. The two orders under discussion met one another on common ground, at Athens, which had been spared by the Dorian invasion, and so retained more of the old civilization than any other important city in Greece proper.

Parallel
development
of the Ionic.

305. The invention of the Corinthian order is traced by some from the palm-leaf-capped columns in Egypt, although the resemblance between such columns and those of the Corinthian order is extremely slight. The modern habit of rejecting traditions, justifiable no doubt in many cases, is often carried too far, and we may accept the statement of Vitruvius (iv. 1) that Callimachus was led to the invention by seeing an acanthus plant which had twined itself round a basket of sepulchral offerings, particularly as the date of the building of the temple at Bassae, where the earliest known example of such a capital was found, accords perfectly well with the era of Callimachus. It may also be remarked as favourable to the theory of its being a personal invention, that the new feature seems to have taken its place in architecture very gradually, and it was not until the Doric had become so attenuated as to have lost its character for sublimity, and the Ionic had been so frequently repeated as to have led to the desire for some novelty, that the Corinthian order obtained general acceptance. Probably the first great work in which it took the prominent place was the Olympieum at Athens. It had been used in subordination with Doric and Ionic, as already related, at Bassae, and about the same time or very shortly afterwards with Doric in the Tholus at the Hieron of Epidaurus and in the great Milesian Ionic temple at Didyma. It had also, according

Derivation of
the Corinthian
order.

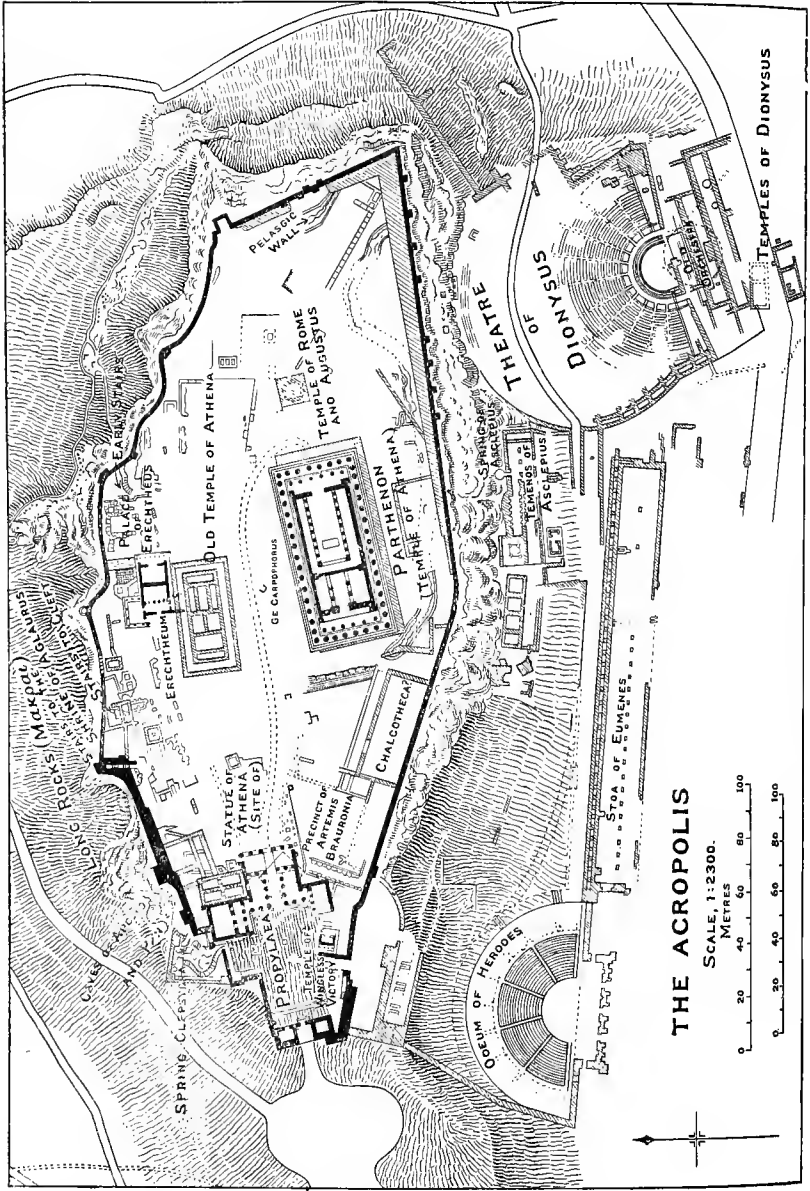


Fig. 24.

to Pausanias, been combined with both the more ancient orders at Tegea. In Roman times the Corinthian and the modifications derived from it were used almost exclusively.

306. The essential parts of a completed Doric building may be seen upon the accompanying diagram. The whole structure usually rests upon three steps, *aaa*, of which the uppermost is called the stylobate (*στυλοβάτης*). These steps always show a slightly curved convex surface, sloping towards the

Architectural members of a Doric building.

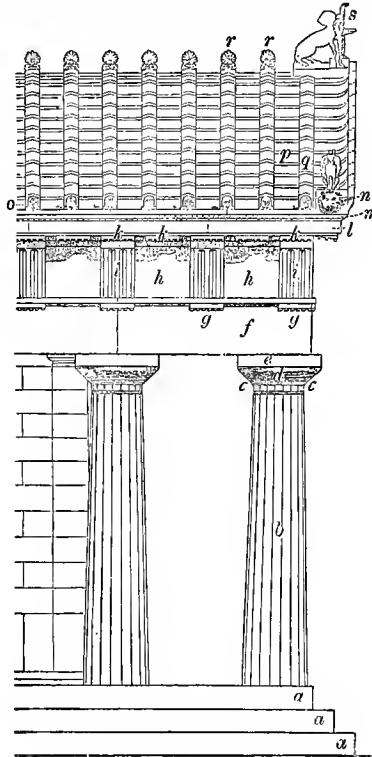


Fig. 25. Doric order (Aegina).

ends and the sides. Directly upon this stylobate, with no intervening base, rests the shaft of the column, *b* (*στῦλος* or *κίων*); this shaft is either monolithic or composed of drums (*σφόνδυλοι*); it is fluted (*ῥαβδωτός*), the top and bottoms only of the flutes being finished before the column was set up; in unfinished temples the rest of the shaft remains unfluted, as at Segesta. Doric flutes intersect at sharp angles. The neck of the column, *c* (*ὑποτραχήλιον*) is usually surrounded by fillets (Lat. *annuli*). On this rests

the curved echinus, *d* (ἐχίνοσ) forming a transition to the square abacus, *e* (πλίνθος). These members, *c*, *d*, *e*, together form the capital (κιονόκρανον or κιοόκρανον). The upper part resting on the columns, *f*—*m*, is together called the entablature (ἐπιβολή). Its lower portion is the plain architrave, *f* (ἐπιστύλιον). The frieze is divided into triglyphs, *i* (τρίγλυφοί), so called because they are divided into three bands by two vertical channels, and metopes, *h* (μετόπαι), or holes between the triglyphs. It is generally supposed that the triglyphs represented the ends of the horizontal beams in a wooden prototype. Either some or all of the metopes might be

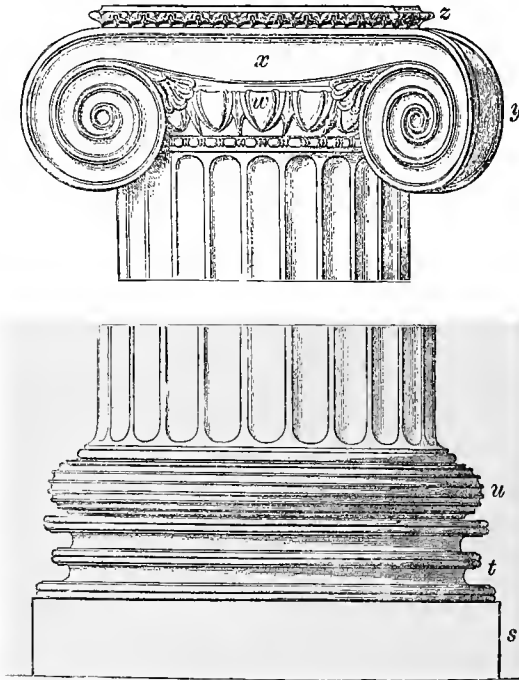


Fig. 26. Ionic column (Priene).

decorated by sculpture. Below the triglyphs come the regulae with guttae, *g*. There is usually one triglyph over each column and one over each intercolumniation. Above the frieze is the cornice (γείσων), *l*, crowned by the sima (κῦμα, κυμάτιον), *m*; its under surface has, over each metope and triglyph, a modillion or mutulus, *h*, with guttae, which probably represents a slanting beam of the gable roof. The roof itself was covered with tiles (κέραμοι) either of pottery, or more often, in large temples, of marble; they were in alternate rows of flat tiles with raised edges, *p* (σωλήνες), and ridge-tiles, *q* (καλυπτήρες): the ridges terminated below in antifixes (ἀνθήμα), *a*,

and above, on the ridge of the roof, in coping tiles (*ἡγεμόνες*), *r*; lions' heads, *n*, usually served the purpose of gargoyles. The gable end or pediment (*ἀέτος*) was often filled with sculpture; and it also had acroteria, *s*, above it whether figures or conventional ornaments, on the centre and at each end.

The Ionic order differs from the Doric both in column and entablature. The Ionic column is of two kinds, the Ionic proper and the Attic (see the diagrams); both alike have a base (*σπείρα*), and a volute capital; but the base in the Ionic consists of a torus, *u*, resting on a lower member divided by two channels (*τρόχιλοι*), *t*, while the Attic base has an upper and lower

Architectural members of an Ionic building.

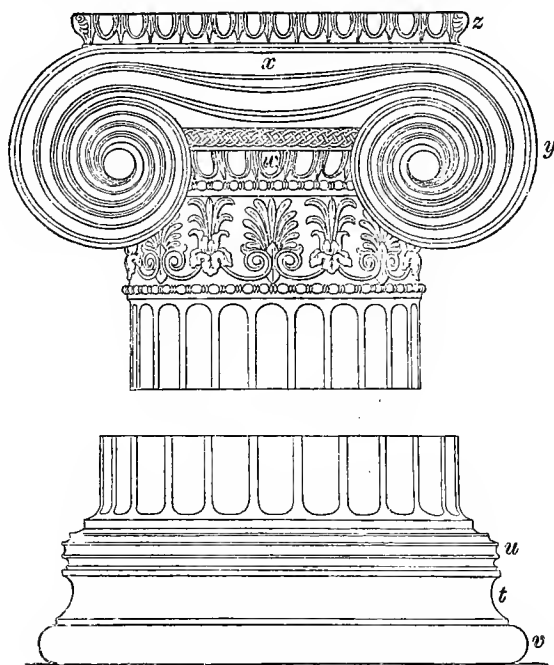


Fig. 27. Attic column (Erechtheum).

torus, *uv*, divided by one channel, *t*; the upper torus is often fluted. In early examples, the base varies considerably in form. The base sometimes rests upon a square plinth, *s*, but this member is often omitted, especially in the Attic form. The shaft is fluted, but the flutes do not intersect, being separated by flat fillets. The neck of the Attic column is enriched by a band of honey-suckle ornament (*ἀνθέμιον*). The capital consists of a torus or echinus, *w*, surmounted by a channel, *x*, which ends on either side

in volutes, y , and a low abacus, z . In the Ionic form the channel is plain; in the Attic it is divided by a deeply profiled incision. The Ionic form may be seen in most of the temples of Asia Minor, and the Propylaea and Temple of Nike Apteros at Athens; the great example which gives the name to the Attic form is the Erechtheum. The entablature has an architrave divided into three bands or fasciae; above this, in what is usually regarded as the normal form of the order, is placed a continuous frieze ($\zeta\omega\phi\acute{o}\rho\omicron\varsigma$), not divided into metopes and triglyphs, but often adorned with sculpture. The frieze is, however, omitted entirely in several of the best-known examples from Asia Minor, and the cornice comes immediately above the architrave. Below the cornice is a row of dentils in the Ionic, but not in the Attic form; modillions also are found; but where they occur they are always below the dentils, not above them as in Roman architecture. The Corinthian order is identical with the Ionic in everything except the capital.

307. The earliest temples were probably simply shrines, consisting of four walls, carrying the roof, with a doorway usually in the eastern wall. This simplest type was followed by a succession of structures, the classification of which, according to Vitruvius (who evidently uses Greek sources), was as follows:

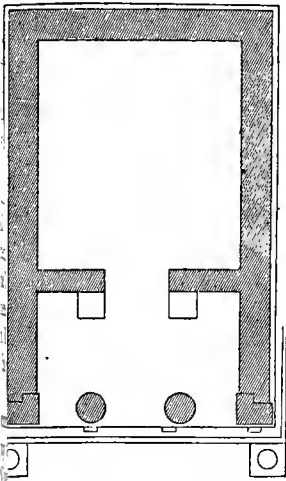
Classification
of temples.

1. In the temple in Antis (*ἐν παραστάσει*, Fig. 27^a, 1, 1 *a*) the walls of the cella were prolonged a little beyond the doorway and terminated each with a pilaster. Between these antae as they were called might be placed two columns, so that a porch having three entrances was thus formed in front of the door. The roof, with its shallow gable or pediment, rose above this, supported by the two columns and the antae. Sometimes a similar porch was added at the back also.

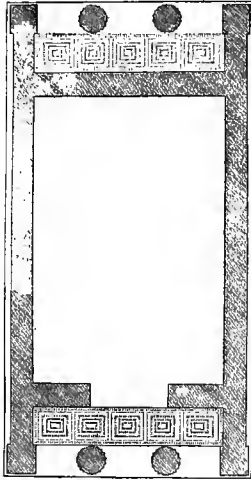
2. The Prostyle temple (Fig. 27^a, 2) marked a considerable advance on the temple in Antis. Two columns were added, one in front of each of the antae, and these with the columns between them formed a portico in front of the entrance.

3. In the Amphiprostyle temple (Fig. 27^a, 3) the prostyle portico of the front was reduplicated at the back. A familiar example is that of the elegant little temple of Nike Apteros, near the entrance to the Acropolis at Athens. The front porch so formed was called the Pronaos and that in the rear the Opisthodomus or Posticum.

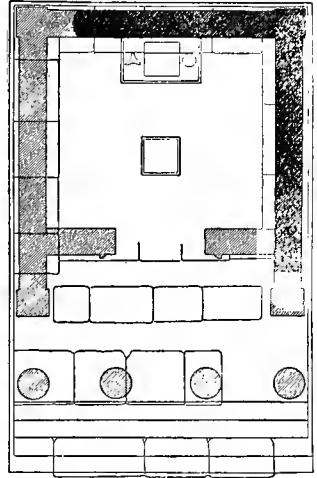
4. The Peripteral temple. (Fig. 27^a, 4, 4 *a*.) According to the definition of Vitruvius this form was developed from the Amphiprostyle temple; but in the great majority of extant examples it appears as an adaptation of a temple formed of a cella, with a porch at each end like that of the temple in Antis. Round this centre was built a complete colonnade, forming a covered ambulatory on each side of the cella. This arrangement, which marked an enormous advance on the amphiprostyle temple, was probably an invention of Greek architects. In Egypt there were open courts with



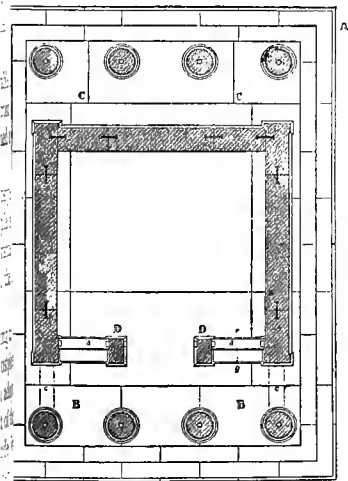
1. Temple in Antis (smaller temple at Rhamnus).



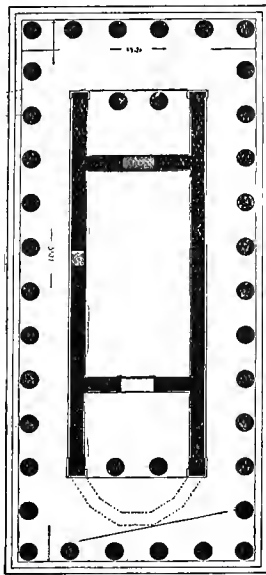
1 a. Temple in Antis with posticum (Temple of Artemis at Eleusis).



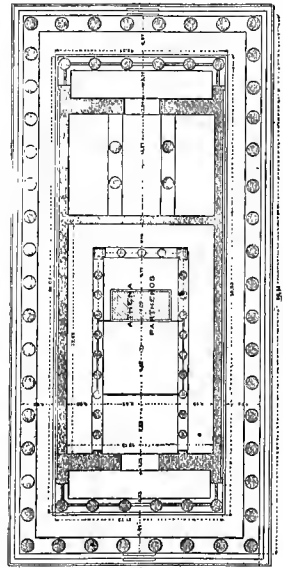
2. Prostyle temple (Temple at Selinus).



3. Amphiprostyle temple (Temple of Athena Nike at Athens).



4. Peripteral temple in Antis (Theseum).



4 a. Peripteral temple, Amphiprostyle (Parthenon).

Fig. 27^a. Plans of Temples.

colonnaded ambulatories against the external walls, but the effect of these was so different from that of the Greek temples that they could hardly have been taken as models. The Greek form appears to have been a native development, and was probably invented very early, since it appears in the Heraeum at Olympia, but remained in favour to the very last.

5. The **Dipteral temple** required a double range of columns round the cella. A variety of this class, called by Vitruvius the Pseudodipteral, omitted the inner row of columns on the flanks but retained its space, the cella wall ranging with the second column from the corner. The great temple at Selinus is pseudodipteral.

6. The **Hypaethral temple** was identical with the Dipteral, except that it had an entrance at each end, and in the midst a kind of open court surrounded by a portico of two ranges of columns, one above the other. Vitruvius' example of this is the Olympieum at Athens. But it should be observed that the plan of this temple as derived from excavation does not closely agree with the definition; the great Milesian temple at Branchidae is its best representative.

Vitruvius takes four as the normal number of columns at each end of an amphiprostyle temple; the normal peripteral, formed by placing a colonnade round such a tetrastyle temple, is hexastyle, and the dipteral or pseudodipteral octastyle. But where the amphiprostyle temple itself is hexastyle, of course its peripteral form is octastyle, as in the case of the Parthenon; Vitruvius says that the normal Hypaethral is decastyle; but the example he quotes is octastyle. For the peripteral temple with six columns in the front, he gives 11 as the usual number for the sides, and, for an octastyle temple, 15; but in this respect the temples varied considerably, the earliest temples being usually the longest in proportion to their width: the Parthenon had 17.

308. Of the monuments of Greek architecture, few have come down to

Existing re-
mains of Greek
architecture.

us in a condition calculated to exhibit their original beauty, but imperfect remains and particularly underground foundations exist to a great extent. Much has already been found, and fresh additions to our knowledge are being continually

made. Of the works left standing in a more or less perfect state, temples and theatres supply the largest list. Temples have in several instances been preserved to us in consequence of their having been converted into churches. At Athens this circumstance has preserved to us the Parthenon, the Erechtheum, the Theseum, and the larger portion of what now remains of the Olympieum. The temples at Paestum have been saved by the insalubrity of the site. Theatres have been protected partly by their prolonged use during the early centuries of our era and partly by the extreme solidity of the masonry of their enclosing walls. A similar condition has in many cases preserved to us important remains of ancient fortifications, to which end their lofty sites have often contributed—a



Fig. 28. Temple of Olympian Zeus at Athens.

favourable condition shared by some of the finest temples, such as the temple in Aegina, and the temples at Sunium and Bassae. Of strictly secular buildings, the Thersilion, or 'Hall of the Ten Thousand,' at Megalopolis, lately discovered by the British Archaeological School, though recovered in plan only and by means of excavation, is too important not to be specially mentioned. The Treasuries exhumed at Olympia and Delphi are also valuable recoveries. Private houses have also been found, especially at Delos and at Priene; for these see Ch. VII. 8.

309. The principal site on which Doric temples are to be seen is

Existing re-
mains of Doric
temples.

Athens, where the Parthenon and Theseum represent the architecture of the best period. The date of the Parthenon is well known: it was dedicated in 438 B.C. The architectural features of the Theseum seem to indicate a slightly earlier date. At any rate it exhibits all the refinements of beauty and skill of the best period. The Propylaea, coeval with the Parthenon, is a building belonging mainly to the Doric order in its most perfect period, while the gate called that of the new Agora, dated about the beginning of our era, exhibits the same order in its decadence. The proportion of the height of the column to the diameter in the former of these two is about the same as in the Parthenon, namely $5\frac{1}{2}$, in the latter it is a little more than 6, but the chief sign of inferiority is seen in the contour and want of projection of the capital. There are also, at Athens, important fragments of Doric structures of a much earlier period, in particular one which has the appearance of being the most archaic that has yet been discovered. Its discovery in a city which claimed chief relationship with the Ionians goes to prove that employment of this order was not exclusively a question of race. The next most complete and important example of the Doric order is the Temple of Poseidon at Paestum, which preserves the whole of its peristyle complete. It is a magnificent building, of archaic character, possibly belonging to the sixth century B.C. It is the only instance remaining of what was probably not an unusual form, having in the interior two ranges of colonnades, one above the other, for the purpose of supporting the roof. It is known by written records that this was the case in the Parthenon, and by unmistakable fallen fragments that it was so in the temple at Aegina. In the temple at Paestum the capitals are larger in proportion than they are in the Parthenon, being intermediate between the latter and the example at Corinth. Two other ancient buildings form a group with the Temple of Poseidon, but are in themselves of greatly inferior interest, one called the Temple of Ceres and the other, which may be a secular building, called the Basilica. They are still standing, with their peristyles complete, on an unencumbered site, and the effect produced by them is very striking. Next to the remains at Athens and Paestum, Acragas (Girgenti), and in a lesser degree Syracuse, present the most important examples of Doric temples. There are numerous ruins at Selinus, Olympia, Delphi and Delos, which furnish valuable material for study.

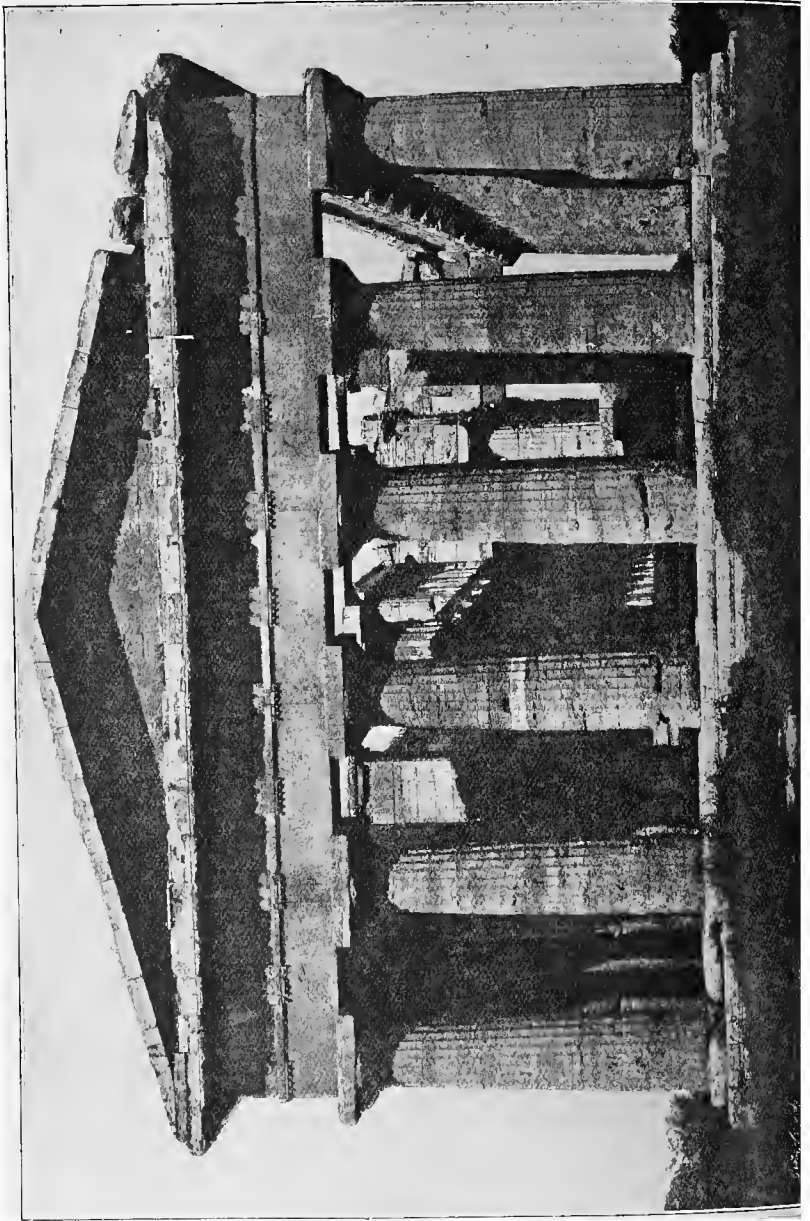
310. The most refined and beautiful examples of the **Ionic order** are at Athens. Of the complex and elegant Erechtheum on the Acropolis substantial remnants exist, and that exquisite gem, the Temple of Nike Apteros, is still preserved; both of these have been to a great extent reconstructed out of the original materials; but the memory of the small temple which formerly existed on the banks of the Ilissus, not far from the gigantic columns of the Olympieum, is only preserved to us in the carefully executed plates of Stuart (vol. 1.). The internal Ionic architecture of the temple at Bassae

Existing re-
mains of Ionic
temples.



Fig. 29. Temple of Nike Apteros.

should be also specially mentioned. As regards size, the palm must be assigned to the temples of Asia Minor. Some of these are enormous, and amongst them are the two oldest known to us, the Temple of Hera, at Samos, and that of Artemis, at Ephesus. The excavations at the latter place disclosed different layers of foundations. The uppermost and latest foundations belong to the time of Alexander the Great, when the earlier temple, of the time of Croesus, had been destroyed by fire. The latest was 342 feet in length and 163 feet in width, and the sixth-century temple was nearly the same size. The temple at Samos was very nearly as large.



The temple of Artemis at Sardis had columns 60 feet high, and was 340 feet long and 150 feet wide; but the largest temple of all was the temple at Didyma, near Miletus, which has been already mentioned. In addition to the above there were Ionic temples of great beauty and importance at Magnesia, Priene, Teos, and the Smintheum in the Troad. The Ionic order, though much rarer in Magna Graecia than the Doric, was not unknown there. The temple built by the Locrians near Gerace was of this order, as was the small temple 'of Empedocles,' at Selinus. Mention

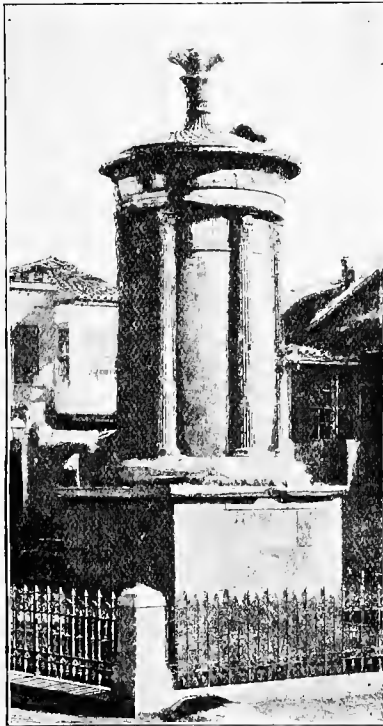


Fig. 31. Choragic Monument of Lysicrates.

should also be made of the fine internal columns of the Propylaea at Athens, and various elaborate tombs, especially the Nereid Monument and the Mausoleum at Halicarnassus.

311. The invention of the **Corinthian order** by Callimachus has already been spoken of, as well as its first employment at Bassae and Epidaurus. A very beautiful and early example remains to us in the Choragic monument of Lysicrates, at Athens (date about 335 B.C.), now sadly mutilated but for-

Existing
examples of
the Corinthian
order.

tunately seen and recorded by Stuart when in a fairly perfect state. The capitals of the example from Epidaurus are well preserved. For a long time this order was used with much reserve, but after its employment by Antiochus Epiphanes, about the year 174 B.C., as the ruling order in the great temple of Olympian Zeus at Athens, it became almost exclusively used both in religious and secular buildings.

312. Finally, the characteristics of these orders may be thus stated.

The Doric on account of its gravity and simplicity is by far the most solemn: it received from Greek architects great refinements, of a scientific and artistic character, particularly in the mathematically adjusted profiles of the mouldings and the curvatures of the main vertical and horizontal lines applied as delicate corrections of an optical nature, together with a rigorous but very practical scheme of proportion, which undoubtedly contributed to the perfection of the works of the best period. These principles had indeed been long applied in a greater or less degree before they reached their climax in the Theseum, Parthenon, and the Athenian Propylaea, but afterwards they were gradually neglected, and the Doric order in its last representations having become flat and degenerate, went out of favour and almost ceased to be practised. The Ionic order of the best time partook of all or most of the refinements which were applied to the Doric, and had the same beauty of outline and the same studied accuracy of proportion. It admitted of more ornament than the Doric, but when subsequent fashion demanded still more elaborate decoration, it was of too pure a nature to admit it with advantage, and it yielded its place to its successor the Corinthian, which was ready to accept from the hands of the Romans all the superabundant enrichment which they looked for.

313. As the Parthenon (Fig. 27^a, 4a) may be taken as the type of all Greek temples in their full development, a general notion of the appearance and object of such structures may be obtained from a short description of that building. The main purpose of a temple was to enshrine the statue of the deity to whom it was dedicated, and this function was performed by the *vads* or *cella*. The statue was placed looking towards the east, in the central axis of the temple; and care was taken in this shrine, as in most other temples, that there should be an unobstructed view of the local horizon; in this case the ridge of Mt Hymettus was seen through the lofty eastern door. The object of this arrangement was that on certain particular days of the year the rising sun, and on all occasions the first bright eastern glow, might lighten up the statue, and there can be but little doubt that when the temple was first founded the orientation was so chosen that on the principal feast day at least it should be illumined by the rising sun. On the occasion of festivals the main body of the worshippers stood without; the interior was not intended to receive a congregation, as except in the early morning the light there would have been obscure. Apart from the great doors, a certain amount

Character-
istics of the
three orders.

The
Parthenon.

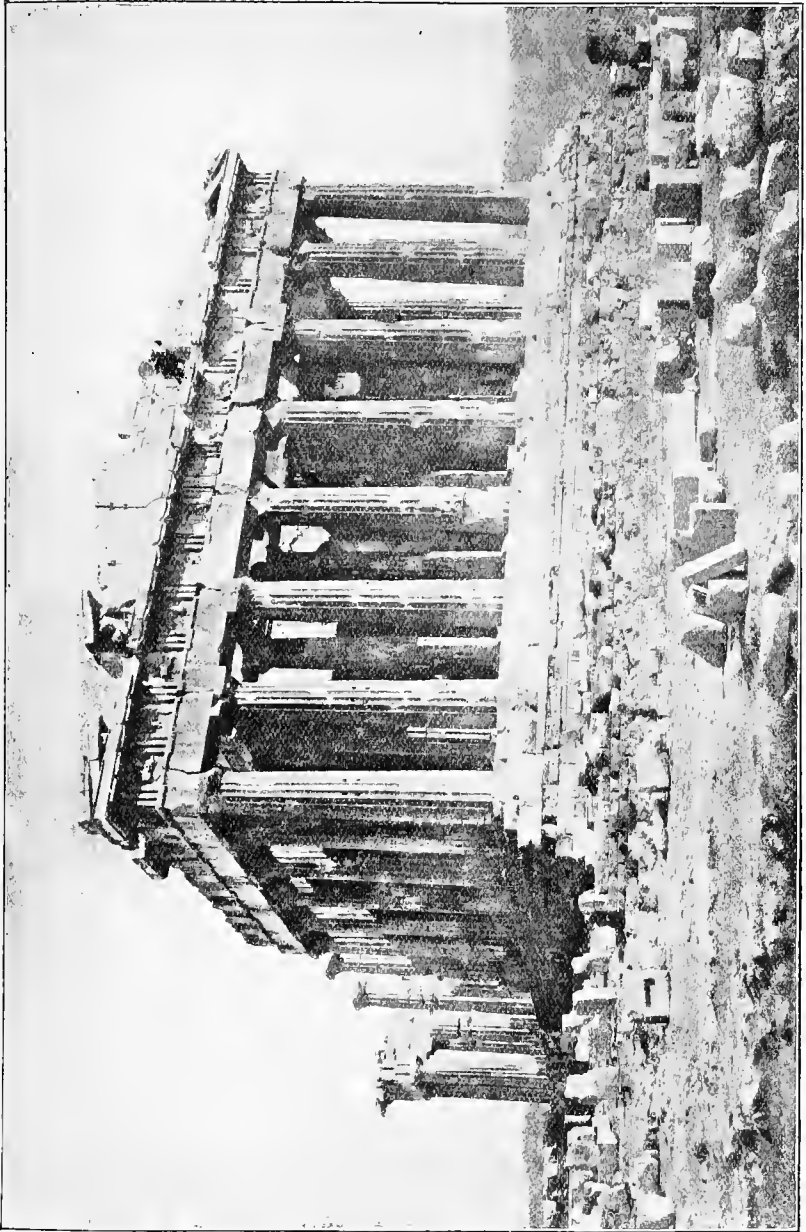


Fig. 32. The Parthenon.

of light would reach the cella through the semi-transparent marble tiles of the roof. It has been suggested that there were other arrangements in the larger temples to introduce some light from the roof; but there seems no necessity for anything of this kind in the Parthenon. The *vaos* in the Parthenon was about 100 feet in length, and so it was able to inherit from the earlier temple that it replaced its official title of the Hecatompedon. The total interior breadth was 63 feet, divided into three aisles by colonnades, the central division being 34 feet wide. The flanking colonnades were returned on the west, but the eastern end was almost entirely occupied by the great entrance doorway. There were no galleries, but the two ranges of Doric columns were connected by architraves, the architrave of the upper range giving support to the roof. The statue stood at 60 feet from the entrance. At the back, that is westward of the *vaos*, another apartment 63 feet north and south by 43 east and west, was formed; the name Parthenon, in official documents, belongs to this chamber only, though it is often loosely applied to the whole building. The chamber had originally no door of communication with the *vaos*. Its ceiling was supported by four lofty columns in the middle of the apartment, and it was entered from the west by a door of the same size as that which entered the *vaos* from the east. Each of these doors was faced with a portico of six Doric columns. The eastern porch was called the Pronaos, the western the Opisthodomus. Thus these two chambers with their porches formed a complete amphiprostyle temple. The whole was then surrounded by an ambulatory called the peristyle, supported by forty-six Doric columns. Both pronaos and opisthodomus were furnished with gratings reaching from floor to roof between the columns; and so all the compartments of the building were suitable for storing precious offerings and treasures; we have many inventories of their contents. The opisthodomus and Parthenon were used as treasuries. The total length on the upper step, called the stylobate, which carried the columns of the peristyle, was 228·14 English feet, and the breadth, also on the upper step, 101·33. It will be seen that this forms very nearly the proportion of 9 to 4 [it would be exact if the breadth had been 101·395]. It was almost invariably the case that a Greek temple was so planned that the length and breadth of the stylobate formed with each other a ratio in low numbers (it was not always the upper step that was taken, but one of the steps of the stylobate, which were generally three in number). There is scarcely an exception to this rule of proportion. This is not the only instance of proportion in low numbers found in contiguous portions, both horizontally and vertically, in this temple; but the subject would be too extensive to follow here in detail. The total height of the temple to the apex of the roof, measured from the bottom of the stylobate, was 65 feet, to which the columns contribute 34·25. This temple, built entirely of white marble, was also very richly adorned with sculpture. At the two ends the triangular spaces enclosed between the horizontal cornice and the sloping lines which

indicated the roof, were filled with magnificent sculptures. There were also other important sculptures in the metopes under the great cornice, and in the frieze which surmounted the cella wall, and these were carried round its whole extent, within the peristyle. For these sculptures, of which the greater part are now in the British Museum, see § 324.

The chamber called the Parthenon is almost if not quite peculiar to this building; in the more usual form the cella with its pronaos and opisthodomus and external peristyle would complete the temple. There is also some evidence of decorative painting, but the scantiness of this evidence is consistent with the view that colour, which was applied largely to temples built of soft stone and coated with a fine stucco, was used with great reserve on marble structures, being employed only in details and on narrow mouldings, while the broader surfaces were left plain.

There is no full and systematic modern work on Greek architecture. The following are either very brief or deal only with portions of the subject: Perrot and Chipiez, *Histoire de l'Art dans l'Antiquité*, vol. vi. *Grèce primitive—Architecture*; Borrmann and Neuwirth, *Geschichte der Baukunst*; Anderson and Spiers, *Architecture of Greece and Rome*; B. Fletcher and B. F. Fletcher, *History of Architecture* (useful for its numerous diagrams); Penrose, *Principles of Athenian Architecture*; Marquand, *Greek Architecture*. See also the publications, too numerous to quote, of different sets of monuments, such as those of Olympia, Delphi, Athens, Sicily, Asia Minor, etc.

Bibliography.

IV. 3. SCULPTURE¹.

A. ARCHAIC PERIOD (*circa* 650—500 B.C.).

314. ANCIENT tradition regarded **Daedalus** as the first maker of statues. Whether Daedalus be an entirely mythical character or not, his name is associated with the earliest schools of sculptors. The tradition which makes Crete the centre of early progress in sculpture is borne out by the discovery of statues (Eleutherna, Prinia), which are evidently the work of a native school deriving its conventions from Egypt. A statue of cognate style found at Tegea in the Peloponnesian peninsula illustrates the statements of ancient writers about work executed on the mainland by **Dipoenus** and **Scyllis**, Cretan pupils of Daedalus, who carved both in marble and in wood and ivory. From about 600 onwards we can

Cretan and
Peloponnesian
Schools.

¹ The following are convenient divisions: (A.) the Archaic period (*circa* 650—500 B.C.), (B.) a period of transition (*circa* 500—460 B.C.), (C.) the period of maturity (*circa* 460—400 B.C.), (D.) the great sculptors of the fourth century (400—320 B.C.), (E.) the Hellenistic period (320—31 B.C.), (F.) the Graeco-Roman period (31 B.C. onward).

trace the existence of a distinct Peloponnesian school and of less important centres in Attica and Boeotia. Most of the early statues which survive are nude male figures standing erect in a traditional Egyptian pose, the left foot advanced, the hands hanging rigidly at the sides. Such are the statues

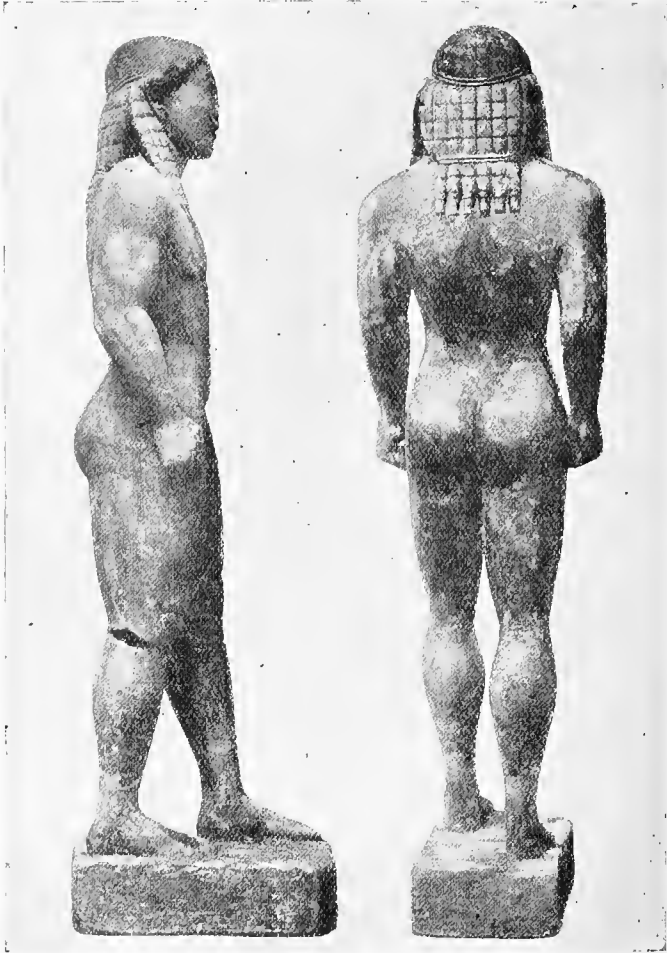


Fig. 33. Statue by Polymedes of Argos, one of a pair representing Cleobis and Biton, found at Delphi.

of Cleobis and Biton, set up at Delphi to commemorate their filial piety (Herod. i. 31). The inscription by which they have been identified gives the name of the sculptor, **Polymedes** of Argos. One of them is shown in Fig. 33. Their sturdy proportions and exaggerated muscles foreshadow the

athletic ideals which were to characterize the Argive school of the fifth century.

Similar male figures, formerly known as 'Apollos' but more conveniently described by the generic name of Kouroi, were produced by archaic sculptors over a very wide area. Besides the Continental centres already named, we find them in a large Ionian region, notably in Cyprus, Rhodes, Samos and Chios, and

Male and
female types.



Fig. 34. Marble statue dedicated by Nicandra, from Delos.

an Insular area with active seats of production in Naxos and Paros. The uniformity of type must be explained by radiation from a common centre such as Crete. For female figures, which were always draped, there was

at first no uniform convention. Fig. 34 shows a very primitive votive statue from Delos, flat and meant to be viewed only from the front, which may be contrasted with a cylindrical type represented by statues from Samos and Athens. Like the Kouroi, these Korai do not necessarily represent divinities; some were votive offerings set up in sanctuaries, others were monuments over tombs.

315. The exploitation of marble quarries, first in Naxos and afterwards in Paros, which yielded a much finer quality, gave a great impetus to the insular schools and carried their products to all parts of the Greek world. A colossal sphinx on a high Ionic column, dedicated at Delphi, is a good example of the laborious but clumsy workmanship of Naxos. In Ionia the great sanctuaries of Miletus, Samos and Ephesus, with their demand for new buildings and votive offerings, fostered the growth of many different arts. Wonderful stories were told about **Rhoecus** and **Theodorus** of Samos, architects, sculptors and pioneers in bronze-casting. The Samian school experimented with the draped male form both standing and seated. The examples found in the island have much in common with the heavily draped seated figures from Didyma, now in the British Museum; both the type of the statues and their arrangement in an avenue betray Egyptian influence, a result of the close intercourse between Miletus and Naucratis on the Nile. The Ionian artists were also stimulated by the patronage of the Lydian court. Early in the sixth century Alyattes dedicated at Delphi a masterpiece by **Glaucus** of Chios, who is said to have invented the art of welding iron; it was an open-work iron-stand, chased with animal and floral designs, supporting a silver bowl. Croesus contributed to the cost of the sculptured columns in the Artemisium at Ephesus; fragments which survive have been claimed as works of the Chian school, founded by Micciades about 600 and continued by his son **Archermus** and his grandsons **Bupalus** and **Athenis**. Archermus was said to have originated the winged type of Nike; just such a figure has come to light at Delos, and near it a base signed by Micciades and Archermus. The grandsons seem to have perfected the draped female type. Pliny notes that much of their work was to be seen in the islands, particularly Delos, and we may recognise their influence in the later Korai found there.

In the second half of the sixth century the Ionian style in sculpture enjoyed a vogue almost as wide-spread as Ionian commerce. It took root in Lycia (reliefs of the Harpy Tomb) and penetrated to Cyprus, where it modified but failed to break down the conservative local tradition; it was carried to the shores and islands of the northern Aegean, to Black Sea colonies, to Etruria, and even to Spain where it helped to produce the hybrid Iberian style exemplified in the Elche head (now in the Louvre). Ionian artists executed important commissions on the mainland, such as the Throne of Amyclaeon Apollo made for the Spartans by **Bathycles** of Magnesia and known to us through

Insular and
Ionian
Schools.

Ionian
sculpture
outside Ionia.

Pausanias' description, and a series of Treasuries at Delphi, dedicated by Siphnos, Cnidus and Phocaea, of which we have extensive remains—exquisite miniature temples with porches borne by caryatids and friezes in which a variety of subjects, including a Gigantomachy and groups of seated deities, are treated with growing mastery of composition and high technical skill. The pediment of the Cnidian Treasury represents Apollo and Heracles in dispute over the tripod; Athena stands between them, Artemis and other figures at either side; next the chariots of the two rivals, and in the angles first a kneeling and then a recumbent man. Here for the first time we have several of the motives which were used in the great pediments of the fifth century. On the other hand the pedimental sculptures of an early sixth century temple, recently brought to light in Corfu, are neither coherent in subject nor harmonious in scale—in the centre a bogey-like Gorgon flanked by her children Pegasus and Chrysaor and by two couchant panthers, and in the angles, where they seem puny by comparison, two detached groups of gods in battle with giants; this may be Peloponnesian work.

316. It is on the Acropolis at Athens that the interaction of various schools can best be studied, owing to the preservation of much early sculpture in the layers of débris buried after the sack of the citadel by the Persians. They must have found there a veritable museum of works of art dating from the seventh century onwards, and our own generation has succeeded in piecing together many of the statues which they wrecked. An earlier stratum yielded sculptures in poros (local limestone), mostly remains of stiffly composed groups in high relief which adorned the gables of early temples—chiefly combats of heroes and monsters, among them the so-called Typhon, whose three human bodies spring from a coil of snaky tails. There are also some life-sized groups of lions tearing bulls. The gay colouring of the poros sculptures pays no regard to nature, and their effect must have been somewhat barbaric. None seem to be earlier than about 575 and all must have been discarded before the beginning of the earlier Parthenon about 508 B.C., since they were found under a terrace formed at that time.

Athens:
architectural
sculptures in
poros.

Although marble did not replace limestone for architectural sculpture until late in the century (*c.* 530), it had long been in use for single statues. The earliest specimens of Attic marble-carving are primitive images of the seventh century, and a numerous series of Korai and other works enables us to follow its growth down to about 540, when under the rule of Peisistratus Ionian art came into fashion and the simple native handiwork in Pentelic marble (Fig. 35) was eclipsed by imported statues of Parian. The school of Chios supplied some of these exotic models; the signature of Archermus occurs on a base on the Acropolis, and figures of flying Nikai have been found there which resemble the Delian figure mentioned above. The imported Ionian Korai are fine

Marble
Korai.

ladies, tall and slender, in clinging transparent dresses which are gathered up in the left hand and drawn tight round the lower part of the body. The complexity of the dress, enriched with painted borders and sprinkled



Fig. 35. Kore of Attic workmanship on the Acropolis.

patterns, and the self-conscious beauty of the face with its expressive, inlaid eyes and smiling lips, mark a great technical advance and justify the ancient fame of the Chian school, if not the story of the caricature which enraged Hipponax. The Attic sculptors copied and varied the type, learning much



Fig. 36. Kore showing Ionic influence.

in the process (Fig. 36); but they did not lose their independence and vigour. One of the best of the Korai fits a base bearing the signature of the Athenian Antenor; after the fall of the Peisistratids the same sculptor made a bronze group of the Tyrannicides, of which, however, no copy survives. Thenceforward Ionian influence receded and Attic art became more virile. In the opening years of the fifth century it rendered nude male figures, horses and hounds, with a truthful simplicity and a delicacy of modelling which foreshadow the achievements of the Pheidian age.

B. PERIOD OF TRANSITION (*circa* 500—460 B.C.).

317. The second half of the sixth century B.C. had done much to emancipate Art from archaic traditions. The splendour-loving tyrants, from Polycrates of Samos to the Sicilian rulers, were the patrons of artistic enterprise. Peisistratus above all was conscious of the forces at work and eager to direct them. Religion followed and expressed the movements of the time: sculpture was employed to realise the ideals of mythology. The development of architecture introduced the adornment of metopes and pediments, which helped the sculptor to free himself from the trammels of hieratic tradition. The decoration of interiors by means of paintings taught the sculptor to attempt and the public to appreciate a more natural treatment. This emancipation from artistic conventions was most directly encouraged by the custom of erecting statues in commemoration of athletic victories at the great games. The first of these statues, carved in wood, were erected, as Pausanias tells us, to Rhexibius and Praxidamas, about 536 B.C., and the custom was henceforth universal. The sculptor aimed at representing the perfect development of the human body; the palaestra became his school and supplied him with models. The artists of the transitional and all subsequent periods were influenced by this naturalism in the treatment of ideal subjects, such as the gods and heroes of the temple statues which attained perfection in the works of Pheidias and the other sculptors of the Periclean age.

318. The artists of the period of transition made advances in three directions: in acquiring greater freedom of technique, in establishing types of beauty, and in informing their works with ideal grandeur. The advance in technical skill may be realised by comparing one of the more advanced Kouroi, the 'Apollo' of Tenea (Fig. 37), which though found near Corinth seems to be the work of an Ionian sculptor, with the Choiseul-Gouffier Athlete in the British Museum. In the Tenea 'Apollo' the feet are close together, one advanced

General
impulses to
progress.

The nude
male type.

before the other: the body rests on them in mechanical equilibrium, each half of the figure being identical with the other: the neck is erect; the



Fig. 37. 'Apollo' of Tenea.

head manifests the same mechanical balance and the arms hang symmetrically at either side. On the other hand in the Choiseul-Gouffier

statue (Fig. 38) the weight of the body is thrown upon one leg, while the other is lightly bent; the body and the legs are naturally joined, the head



Fig. 38. The Choiseul-Gouffier Athlete.

is inclined slightly downwards to one side, and the arms are freely extended. Some small bronzes of an early date, representing a discobolus, furnish

a striking illustration of the advance made in this period, if they are contrasted with the *Discobolos* of Myron, which shows the greatest freedom in the rendering of a complex pose.

319. A similar improvement is marked in the modelling of the surface and in the truer anatomy of the human figure. In the early Kouroi the structure of the body, the appearance of the muscles, the elasticity of the surface are incorrectly or inadequately rendered: the later types manifest a most accurate knowledge of the body and great freedom in treating pose or movement. The Choiseul-Gouffier athlete and the *Discobolos* of Myron (Fig. 40), in spite of their faint suggestions of archaic convention, rank very high as examples of perfect modelling. In the treatment of drapery we may contrast the series of draped figures from the temple of the Didymean Apollo (now in the British Museum) with the draped figures from the pediments of the temple of Zeus at Olympia. In the former the folds of drapery are indicated by the mechanical incision of a few straight grooves, which scarcely suggest the body beneath: in the later statues we find that variety of planes and lines which enabled the Greek artist successfully to represent softness and pliancy of texture. The statues already mentioned will serve to illustrate the growth of the sense of beauty. The earlier and late metopes from Selinus illustrate the same process. One of the best instances illustrating the last stages in this transition to the highest and freest art is the Charioteer from Delphi (Fig. 39), whose date would fall about the year 470 B.C.

Anatomy
and drapery.

Sense of
beauty.

320. The schools of sculpture which effected the emancipation from the trammels of archaism were those of Argos with Ageladas as the chief artist, Sicyon with Canachus, Aegina with Onatas, Rhegium with Pythagoras, and Athens with Critius and Nesiotes, Hegias, Myron and Calamis. Argos and Sicyon were closely related to one another. The sculptors of Argos were conservative and 'practised Art as it had been handed down to them.' The fame of Ageladas rests on the tradition that he taught the three greatest sculptors of his time, Myron, Pheidias and Polycleitus. His own works, which included statues of Zeus, of Heracles and of Olympian victors, are not especially praised by ancient authors. Canachus of Sicyon worked in gold and ivory as well as in wood, bronze and marble. His famous Apollo at Miletus is probably reproduced on a Milesian coin as well as in the small Payne-Knight bronze in the British Museum. Still greater importance attaches itself to the school of Aegina, of which Onatas was the chief representative. He executed numerous bronze statues, some of them in groups, and probably contributed to the advance of sculpture in freedom of attitude and of modelling: qualities which distinguish the famous pediment sculptures from the temple of Aphaea at Aegina (now in Munich). This temple, built soon after the Persian wars, was thrown down by an earthquake when the colouring of its sculptures was still well

Schools of
Argos, Sicyon,
Aegina.



Fig. 39. The Charioteer, from Delphi.

preserved, so that it has been possible to recover the colour-scheme as well as the grouping of the figures. In both gables there was a battle-scene, with Athena in the centre, groups of combatants at either side, kneeling archers and fallen men in the angles. Each figure is an independent marble statue, worked in the round and so

The Aegina
pediments.

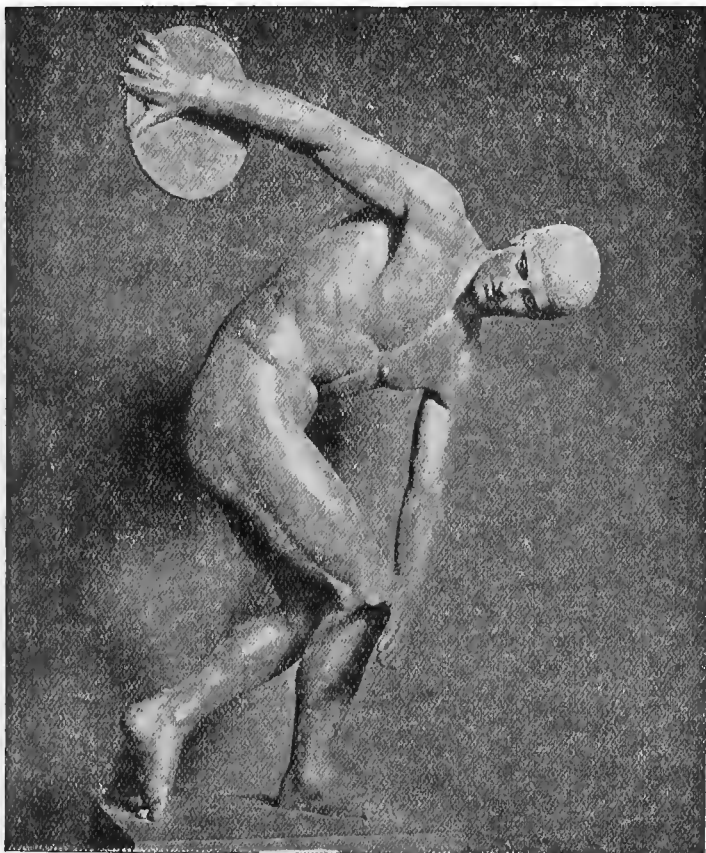


Fig. 40. The Discobolos of Myron.

balanced as to need no extraneous support. The sinewy forms and energetic attitudes may reflect the style of the Aeginetan bronze-workers. Although the two pediments have much in common, they seem to have been designed by different artists, one more advanced than the other, and a comparison of their work illustrates in a vivid way the speed with which

the art of this age progressed and the sense of beauty grew. In the west pediment the faces are distorted by the so-called 'archaic smile,' in the east they are set and serious; again, the attitude of the wounded man is cramped and grotesque in the one, movingly lifelike in the other.

321. The most important work produced at Athens in the decade after Salamis was the second group of Tyrannicides, made by Schools of Rhegium and Athens. Critius and Nesiotes to replace Antenor's, which Xerxes had carried off. The two colossal figures survive in a marble copy at Naples, which can be completed from other sources. The heavy expressionless face of Harmodius with its exaggerated chin shows little advance upon the fine statue of an ephebus from the pre-Persian *stratum* on the Acropolis, but there is a new energy in the movement and greater skill in the handling of the robust muscular forms. The statues of athletes, as we have seen, promoted a freer and truer treatment of the human body; and in this branch of art Pythagoras of Rhegium and Myron of Eleutherae had attained a high level of excellence before the middle of the fifth century. Although Pythagoras won praise for some heroic statues, and Myron's groups of gods, and above all else his famous heifer, are celebrated by ancient authors, the fame of both artists rests chiefly upon their statues of athletic victors: the most noted of these are the boxer Euthymus and a Pancratiast by Pythagoras, and those of the famous runner Ladas and a Discobolos (several copies of which are extant) by Myron. Pliny tells us that Pythagoras *primus nervos et venas expressit capillumque diligentius*, Diogenes Laertius speaks of him as *πρώτον δοκοῦντα ῥυθμοῦ καὶ συμμετρίας ἐστοχάσθαι*, and these passages confirm the impression gained from his works that in the modelling of details as well as in the freedom and balance of his figures Pythagoras marked a new departure. Myron's Ladas was invoked as *ἔμπνοε Λάδα*, and Quintilian, in exemplifying the freedom and variety of pose in statues, says of the Discobolos, *quid tam distortum et elaboratum, quam est ille discobolus Myronis?* These testimonies, confirmed by the extant copies of the Discobolos, show how successfully Myron emancipated himself from archaic constraint in the treatment of the nude male figure. In the Disc-thrower the moment chosen is one of arrested movement. This is also true of the bronze group representing Athena and Marsyas, which can be reconstructed since both figures survive in marble copies. The story ran that Athena invented the flutes, but threw them away because her face was distorted in the act of playing; thereupon Marsyas picked them up. Athena has dropped the flutes and is moving away, but turns to wave the satyr back (Fig. 41), while Marsyas, checked in his advance, stands poised on tiptoe between desire and dread. Myron made his Athena a slim girl, thus heightening the contrast with the satyr whom she overawes.

Calamis of Athens, whose Hermes Criophorus and Sosandra are possibly extant in reproductions, seems to have made some progress in

representing the draped figure. The beautiful bronze statue of a charioteer from Delphi (Fig. 39) is ascribed to him by some authorities, by others to Pythagoras. This figure and some finely modelled fragments of horses are



Fig. 41. The Athena of Myron.

all that remain of one of those groups commemorating a chariot-victory which were much in fashion at the time. **Paeonius** of Mende and **Alcamenes** of Athens, if the eastern and western pediments of the temple.

of Zeus at Olympia are rightly attributed to them, excelled in the bold and harmonious composition of large groups. They just fall below the work of the best period by a certain vagueness in the modelling of detail and by many traces of archaism. In the only certain work of Paeonius, the winged Victory floating in the air from her high pillar, archaism is almost eliminated.

C. PERIOD OF MATURITY (*circa* 460—400 B.C.).

322. The predecessors of **Pheidias** had gradually surmounted the technical difficulties which impeded freedom of artistic execution. It was his great achievement to attain the perfection of art by effecting a complete harmony of form and matter. He applied the sculptor's materials to express the greatest and deepest ideas and emotions of man. The perfection of physical beauty in a healthy and normal type was already established as the artistic ideal. This ideal he adapted to represent the gods and heroes of Hellas, developed through centuries of time by the imagination of a people at once simple and artistic, fixed in type by the epic poets and made more real by the great tragic poets. Through Pheidias Greek Art received those permanent qualities, described by Winckelmann as 'the noble *naïveté* and quiet grandeur of the Greek statues.' Pheidias was thus heir to all the artistic advances made by his predecessors. Born about 500 B.C., he was in the age of greatest receptivity when the victories over the Persians thrilled the hearts of the Greeks. The unity of feeling evoked by the common danger was strengthened by the intercourse between the citizens of different states, refugees from Ionia and the islands as well as Greeks of the mainland. And the Attic people after the great victories, 'forced, as it were, to recolonise their own country,' were moved to give to their city the most splendid adornments of Art. It was in accordance with the character of the Periclean age that Pheidias informed his statues with the grandeur and sublimity which all ancient writers ascribe to them.

On the description of these writers we are obliged to rely for our ideas of his greatest works¹. No adequate reproduction of the colossal gold and ivory statue of Athena Parthenos has come down to us: the various statuettes (the Lenormant, Varvakeion Athenas, etc.) are late Roman copies. The coins of Elis do not enable us to realise his masterpiece, the figure of the seated Zeus at Olympia, the work which moved Quintilian to say that Pheidias had added something to the received religion. This statue of gold and ivory, rising over forty

¹ Furtwängler's suggested recognition of the Lemnian Athena¹ by Pheidias in the statue at Dresden combined with the Bologna head remains an hypothesis.

Pheidias:
his achieve-
ment.

The Athena
Parthenos.

feet high, represented Zeus as seated upon a throne, every available part of which was adorned with smaller statues in the round or filled with large designs of *repoussé* relief in gold. The colour in the gold enamels and the soft ivory tones of the nude flesh, the paintings on the base, had effects of their own, which were yet subordinated to the overpowering unity of the sublime figure of the god. To form our impression of the artistic spirit in which Pheidias worked we must turn to the sculptures of the Parthenon. We must remember that in them we have, not great temple statues, but parts of a scheme of architectural decoration. Even so we are not justified in ascribing these works to the hand of Pheidias with absolute certainty, though we can at least claim for them that they represent Attic sculpture of the time when it was guided by the genius of Pheidias.

The Zeus of Olympia.

323. We can distinguish the earlier from the later works of Pheidias. The first were probably executed to Cimon's orders, when Pheidias had not fully and independently developed his genius. They included the thirteen figures dedicated at Delphi in honour of Marathon, Miltiades in the centre, flanked by Athena, Apollo and a row of tribal heroes, a monument reminiscent of the Argive school. An Athena of gold and ivory at Pellene, another Athena at Plataea, the colossal bronze statue of the same goddess on the Athenian Acropolis (called on doubtful authority *Πρόμαχος*), also belong to the artist's earlier period, none of them perhaps falling later than 460 B.C. About the later period of Pheidias' life there is considerable uncertainty, as there are contradictory accounts of the prosecution for sacrilege directed against him by the enemies of Pericles. It seems most probable that he had already finished his great statue of Athena, which was dedicated in 438 B.C., and was supervising the erection of the Parthenon when the prosecution took place. He then went to Elis and made the statue of Zeus for the temple of Olympia in 438 and the following years. To the years of his absence from Athens must be ascribed the statue of Aphrodite Urania at Elis and the Anadumenus at Olympia, and to uncertain periods of his life the beautiful Lemnian Athena, a Hermes at Thebes, the figure of an Amazon at Ephesus, and other works which Pliny saw at Rome.

Earlier and later periods of Pheidias.

324. The sculptures of the Parthenon consist of metopes in high relief, a frieze in low relief, and pediment sculptures in the round. No works of classical antiquity represent more fully the blending of monumental repose and simplicity with vitality and grandeur, whether we regard the composition of the entire frieze and pediments or take the individual figures one by one. The metopes, representing a variety of subjects, among which the battle with the Centaurs and the taking of Troy can be distinguished with certainty, are the earliest in date. In the pediments there is no uncertainty of touch, no trace of early influence. The compositions in both pediments

Sculptures of the Parthenon.

make Athena the centre of interest. In the east pediment the birth of the goddess, in the west pediment the struggle with Poseidon, are represented.



Fig. 42. 'Theseus' from the East Pediment of the Parthenon.



Fig. 43. The Fates, or Hestia, Gaia and Thalassa, from the Parthenon.

The figures on either side in each pediment have been identified by some archaeologists with divinities or Greek heroes; others regard them as personifications of nature and of localities. The groups are full of varied life and movement, while they are harmonious and restful in their unity and concentration of idea, as well as of design. The single figures, the so-called Theseus (or Olympus, or Dionysus) (Fig. 42), the Fates (or Hestia, Gaia and Thalassa) (Fig. 43) from the east pediment, the river-god Cephissus from the west pediment, are instinct with life in their natural pose, in the modelling of the nude and of the flowing draperies; at the same time they are simple and grand in execution. They are types of human life, which will ever remain, through all changes of fashion or taste,



Fig. 44. Horsemen, from Frieze of the Parthenon.

the classical instances of sculpture. The frieze which ran round the outer wall of the *cella* or nave of the temple was 524 feet in length and represented the Panathenaic procession (Fig. 44). The technique of low relief, in which two and three layers of figures are shown one above the other, the rise from the background never exceeding $2\frac{1}{2}$ inches, marks the highest skill. In the western frieze the horsemen are preparing to mount or slowly moving off; the north and south sides give the procession of horsemen, chariots, lyre-players, men and maidens with offerings, the hecatombs of cows and sheep dedicated to the goddess by Athens and the colonies. The eastern frieze, over the entrance of the temple, represents the ascent to the Acropolis in the presence of the assembled deities to whom the

hecatombs are to be offered. The central scene shows preparations within the temple; the priestess receives two stools, like those on which the deities sit, from girl attendants, and a priest aided by a boy folds the old peplos, removed from the image to make room for the new robe which is to be brought by the procession.

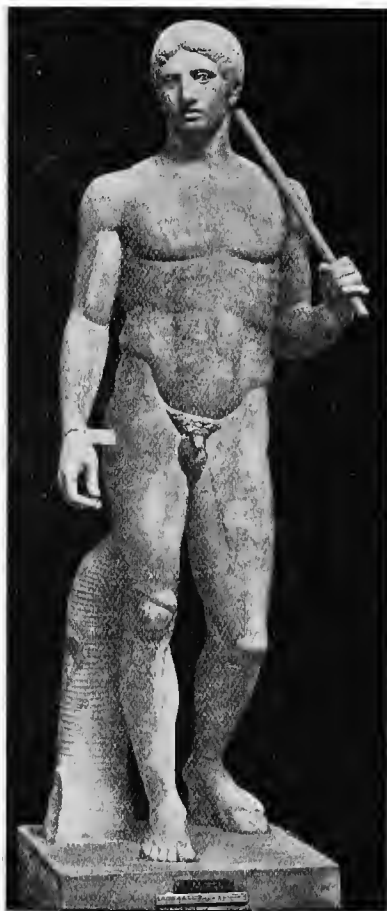


Fig. 45. Doryphoros of Polycleitus.

325. Polycleitus of Argos, whose activity falls in the second half of the fifth century B.C., though his work did not attain the sublimity characteristic of the masterpieces of Pheidias, rivalled him in grandeur and simplicity. While continuing the traditions

of Argos, he was strongly influenced both in spirit and technique by the work of the Attic school. The criticisms of ancient authors and the works ascribed to him combine in presenting him to us in two contrasted aspects. On the one hand he appears as the 'academic' artist, whose Doryphoros establishes a canon of human proportion, and whose works, at once severe and large in character, incline towards monotony and merit the title of Classical in the restricted sense of that term. His canon of proportion is



Fig. 46. Diadumenos of Polykleitos.

massive (*quadrata signa*), not lithe and graceful, and his choice of poses is restricted, according to Pliny—*proprium eius est uno crure ut insisterent signa excogitasse*. Quintilian quotes the opinion that his deities lacked majesty, and that even in his ideal representation of human forms he avoided those ages in which character was most manifest. On the other hand, ancient criticisms and extant works testify to the exceeding beauty as well as to the high finish in the modelling of his statues. These

contrasts can best be reconciled if we assume that the more sober and restricted character belongs to the works of his earlier period, when the influence of the Argive school was dominant, while the beauty and finish, variety and softness, mark a later period, when Attic models had impressed him. The *Doryphoros* (Fig. 45), with square massive body, broad modelling, and oblong head with close mass of finely-carved hair, represents the first period; the *Diadumenos*, especially as it appears in the replica recently discovered at Delos (Fig. 46) and in a head now in the British Museum, has a more graceful pose, a more detailed modelling, a freer treatment of the hair, and represents the second period. The same characteristics appear in the vigorous attitudes and the supreme finish of the metopes from the temple of Hera at Argos. These, as well as the female head, probably from a pedimental statue of Hera, bear the same relation to Polykleitos as the Parthenon sculptures do to Pheidias. The gold and ivory statue of Hera, which Polykleitos made for the temple of that goddess built in place of the older temple burnt down in 423, enjoyed a fame in antiquity second only to that of the masterpieces of Pheidias. We hear also of his statue of Hermes, and that he was victorious over three competitors, Pheidias, Cresilas and Phradmon, with an Amazon statue for the temple of Artemis at Ephesus. Polykleitos appears to have fixed the type of the Amazon which exists in so many replicas in the museums of Europe. Some of the other works ascribed to this artist should probably be adjudged to the younger Polykleitos, who flourished nearly a century later.

326. Both Pheidias and Polykleitos were succeeded by important

Transition to
the fourth
century
masters.

schools. Persistent as was the influence of Polykleitos, no artists of great eminence are mentioned among his followers. Pheidias had as companions or pupils men of great fame, Agoracritus, Alcamenes, Colotes and Theocosmus; his influence can be traced also in the frequent reproduction of types of Zeus and Athena, as well as in the Attic sepulchral reliefs, which follow in style and technique the frieze of the Parthenon. An age of transition came between the age of Pheidias and the great revival of Art under Scopas and Praxiteles in the fourth century B.C. A typical work of this period is the statue of the goddess Eirene with the infant Plutus (Fig. 47), the work of Cephisodotus, who was probably the father of the great Praxiteles. The statue stood in the Agora of Athens, and may be associated with the worship of the goddess Eirene, instituted after the battle of Leucas (375 B.C.). A replica of this work is probably to be recognised in a statue now in the Munich Museum, and it admirably represents the transition. The pose of the figure, the simple and almost severe folds of the robe, suggest the art of the fifth century; while the subject, the goddess carrying the infant son on her arm, like a Madonna with the Saviour, and the downward turn of her head toward the child, mark the introduction of a sentiment which belongs to the fourth century

and which found expression again in the Hermes with the infant Dionysus of Praxiteles.



Fig. 47. Eirene with infant Plutus.

D. GREAT SCULPTORS OF THE FOURTH CENTURY
(*circa* 400—320 B.C.).

327. The leading masters of the fourth century, Scopas, Praxiteles and Lysippus, substitute for the majesty and sublimity of the Periclean age more graceful and familiar aspects of art which appeal to human sympathies and emotions while they succeed better in portraying individual characteristics.

Schools of
the fourth
century.

This tendency, natural in the development of all arts, traceable in the literature and philosophy of the period, was furthered by the change in the social and political spirit of the age. In sculpture the change can be distinguished both in subject and in treatment. In the choice of religious subjects for sculpture Zeus, Hera and Athena make way for Apollo, Aphrodite and Artemis, and in these deities the youthful and almost passionate side is accentuated. Other deities such as Dionysus and Hermes (hitherto bearded) are represented as types of attractive youth and thus lose their aspect of divine reverence and grandeur. New deities are developed out of older forms or evolved from some quality of an existing god (Nike, Eirene, Plutus); and the minor deities or attendants on the great gods (Eros, Maenads, Satyrs) form the subjects of single statues. The influence of the drama, more especially the greater freedom of comedy, and the development of painting, encouraged naturalism and individualism in sculpture, characteristics which find expression in the grave-monuments alluded to above. This class of sculpture served to bridge over the transition from religious to domestic art, as it represented in solemn and religious form figures and scenes and ideas of actual life (Fig. 48). Thus attitudes suggestive of sentiment, the expression of various moods and the appeal to emotion in the spectator, were introduced into sculpture. With the technical advance of painting in colour and form, light and shade (§§ 350 f.), the sense for finer work in texture and modelling was increased in the sculptor, and the art of colouring statues was carried to its highest perfection. Thus subject and treatment combine in producing, not the severe grandeur of Pheidias, but the exquisite beauty of form and charm of expression which are found in the Aphrodite or the Eros of Praxiteles.

328. The chief artists of the period, Scopas and Praxiteles, show a difference in their treatment of individual sentiment.

Scopas. Scopas expressed passion and movement by obvious physical methods; Praxiteles suggests feeling by subtler and less direct appeals. Scopas was a native of Paros, probably the son of the sculptor Aristander, who gained some repute as a worker in bronze and was also employed on a group which the Spartans dedicated at Amyclae to commemorate the victory of Aegospotami. Polycleitus is also said to have taken part in executing this group, and we may perhaps infer a direct connexion between the Argive school as represented by Polycleitus and the artists of Paros. The artistic activity of Scopas falls within the period from 394 to 349 B.C. The pediments of the temple of Athena at Tegea, the eastern representing the hunting of the boar of Calydon, the western the battle between Telephus and Achilles in the plain of the Caicus, were executed from the designs of Scopas, if not by his hand. Fragments of the eastern pediment have been excavated: and two male heads (Fig. 49) show the qualities of pathos, which we regard as characteristic of that artist. The faces are turned on one side and looking upwards. Details of modelling and

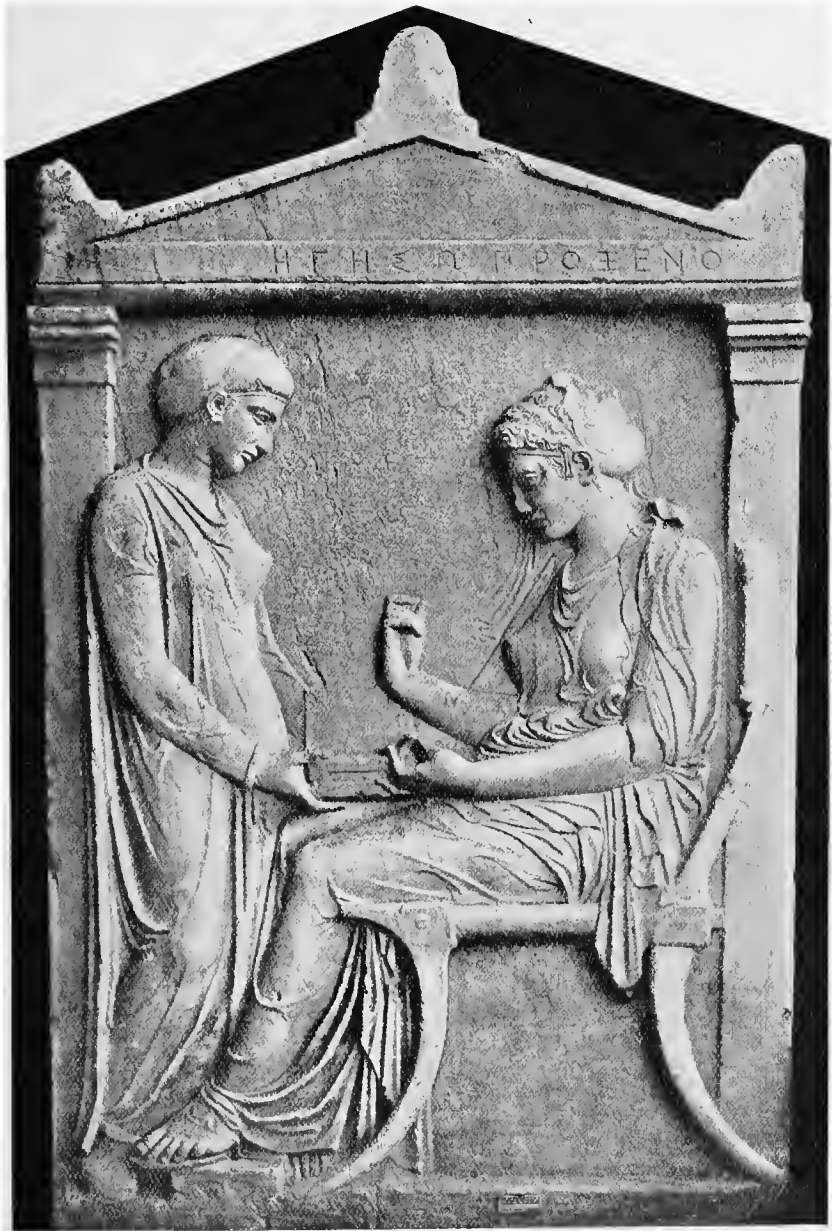


Fig. 48. Sepulchral monument of Hegeso at Athens.

expression confirm the effect of violent emotion. The cheekbones and brows are accentuated by the deep furrows round the nose and mouth: the forehead is not smooth, but shows bumps and depressions: the upper eyelid of the eye is drawn up, and is scarcely visible in profile, while the hollow ridge under the lower eyelid is deeply sunk. Thus in the pose of the head and in the elaboration of details alertness and vigour are suggested. One of the most important works of Scopas, which the rhetoricians delighted to describe, was his raving Maenad, of which a mutilated copy and various adaptations exist. The Maenad was represented in the height of Bacchanalian frenzy: her head thrown back with flowing hair, her drapery blowing in the wind, and her hand holding part of a mangled kid. The effect of movement was intensified by the expression of the face. We have no means of distinguishing with certainty the individual work of the four



Fig. 49. Heads from Tegea.

artists (Scopas, Bryaxis, Timotheus and Leochares), who worked together on the famous Mausoleum of Halicarnassus, the remains of which are now in the British Museum. But the figure of the charioteer from one of the smaller friezes, with the massive drapery flowing back and the body inclined forward, seems eminently characteristic of the art of Scopas. His most ambitious composition, a vast group of sea-gods and sea-monsters, was transported to Rome. It represented the apotheosis of Achilles, Poseidon and Thetis escorting him with a train of Nereids riding on dolphins, hippocamps, Tritons and many other creatures of the sea: a masterpiece of tempestuous movement, echoed in many later designs. Other works of Scopas from their subject or character may not have possessed this quality of movement or passion. Such were the Apollo Smintheus, the Apollo at Rhamnus, the statues of Asclepius and Hygieia, the Hecate at Argos, the

Leto and Ortygia, and the famous Aphrodite, which Pliny preferred to the Cnidian Aphrodite of Praxiteles. In the Aphrodite Pandemos, riding on a goat, which is reproduced on coins of Elis and in other works of minor art, the typical style of Scopas may have found expression. If we assign that masterpiece of ancient sculpture, the huge drum from the temple of Artemis at Ephesus, now in the British Museum, to Scopas (and one of the pillars was ascribed to him by Pliny), we have an instance of more subdued sentiment, approaching the character of the work of Praxiteles, though the upward gaze in the nude Thanatos and in the Hermes reminds us of other works of Scopas.

329. The sculptors associated with Scopas in the decoration of the Mausoleum were themselves of high repute in antiquity. **Timotheus**, we learn from inscriptions, was appointed to make models for sculptures at the temple of Epidaurus, and we may therefore recognize his work in some interesting sculptures found at that site, representing Nereids, Victories and Amazons. A group of Leda sheltering the swan, preserved in Graeco-Roman copies, resembles them in the bodily forms and the clinging draperies. **Leochares** was a famous sculptor of Athens, employed by the general **Timotheus** to make the statue of Isocrates and by Philip of Macedon to produce the gold and ivory portraits of his family for the Philippeum at Olympia. Statues of Zeus and of Ares were also attributed to him; while his bold attempt to represent Ganymede carried off by the eagle, a replica of which can be recognised in the Vatican, shows that he was an artist of originality. (For **Bryaxis**, see § 333 below.)

**Timotheus
and Leochares.**

330. In **Praxiteles**, the younger contemporary of Scopas, the art of the fourth century finds its fullest expression. The more sentimental and sensuous character of his work is revealed in his choice of subjects; ten of the forty-one works associated with his name by ancient authorities represent human figures, while among the divinities whom he represented neither Zeus nor Asclepius occur: Hermes and Poseidon only once. Of the male gods, Apollo and Dionysus were most frequent, conceived no doubt in their more youthful and sensuous aspect; while the boy Eros was represented in three of his most famous statues. Among the goddesses Artemis appears four times either in groups or singly; but **Praxiteles'** fame was founded above all on his five statues of Aphrodite, which served to found the type of nude female beauty in Greek art. **Praxiteles** showed also a preference for figures from the Dionysiac cycle, maenads and satyrs, and in the two groups, the one representing Agathodaemon and Agathe Tyche, the other Peitho and Paregoros, he shows the tendency of his age towards allegorical art. In choice of subject **Praxiteles** is thus in marked contrast to the sculptors of the fifth century, who represented the great divinities in severe and impressive style. The contrast is made more manifest when we consider the artistic qualities of his work, as revealed in the description of ancient authors or in extant

Praxiteles.

monuments. His statue of the Cnidian Aphrodite, for which king Nicomedes offered to cancel the public debt of Cnidus, was set in a small temple. Coins of Cnidus show us the position of the figure, and marble copies at Munich and in the Vatican (Fig. 50) give some idea of pose and outline.



Fig. 50. Aphrodite of Cnidus, Vatican.

The goddess was represented as completely nude and about to enter the bath. The flesh was delicately tinted, the eyes and the hair and the drapery by her side were coloured by encaustic painting, a process which Praxiteles applied to all his marble statues and in which the famous Attic painter Nicias frequently cooperated with him. The exquisite beauty and

the perfect finish of the work gained the unbounded praise of the ancient world. The group excavated at Olympia, Hermes carrying the infant Dionysus (Fig. 51), enables us to appreciate the delicacy of his modelling, which is so inadequately represented in the copies of his works and which



Fig. 51. Hermes with infant Dionysus by Praxiteles.

cannot be reproduced even in a cast from the original. The wonderful indication of texture, the treatment of the hair and of the drapery hanging over the tree stump, combine with the soft grace of outline and the gentle pose and expression of the face to show us the qualities on which rested

the fame of Praxiteles. A fortunate discovery of the French excavators at Mantinea has given us three slabs, representing Apollo, Marsyas and the Muses, which are described by Pausanias as decorating the base of statues by Praxiteles. With their help we may claim for his school certain draped figures of tall and dignified women which inspired some of the best Tanagra figurines and were imitated by portrait-sculptors down to Roman times. The *flens matrona*, mentioned by Pliny, may have been a monumental statue like the Mourning Lady recently acquired by the British Museum from the Trentham collection. Of his Parian Eros we gain some impression from a coin of Paros as well as from the copy at Dresden and a torso in the Louvre. His Apollo Sauroctonos and his Satyr are also represented in copies. All his works have in common a softness of outline and repose in expression; and we may generally notice a downward droop of the head and a downward glance of the eye, in contrast to the upturned gaze in the works of Scopas.

Draped female statues.

331. Lysippus, who became the favourite sculptor of Alexander, owned no master; but his native place, Sicyon, had a well-established artistic tradition and was the seat of a progressive school of painting (§ 350), in which his colleague at Alexander's court, the painter Apelles, had studied. Lysippus was one of the most prolific artists of antiquity: Pliny's statement that he completed 1500 works in his lifetime is doubtless exaggerated, but he worked almost exclusively in bronze, and the casting of bronzes did not of course demand so much labour on the part of the artist as the carving of marble. The passion and sentiment, predominant in Scopas and Praxiteles, are not manifest in Lysippus. Though the individual element in Art reaches its height in his portrait statues of Alexander, yet the greatness of his subject invests his work with a healthy idealism, and raises it to a plane in which personal passion and introspective sentiment have no place. In choice of subject Lysippus approaches the spirit of the fifth century. Aphrodite is not found among his works, but Zeus was represented four times. His statue of that God, made for Tarentum, was a colossus (sixty feet in height). It is probable that the stern-browed type of Zeus with wavy hair, shaggy beard and a naturalistic treatment, such as we see in the Zeus of Otricoli and other copies, owed its origin to Lysippus. Lysippus also delighted in the representation of the heroic world. He represented Heracles five times, in the colossal statue at Tarentum as well as in the statuette of Heracles Epitrapezios. Probably most of the statues of Heracles in the museums of Europe were derived from the type established by Lysippus.

Portraits of Alexander: statues of athletes.

332. He represented Alexander in so many statues that he almost created an ideal type. We are told that he succeeded in combining the lion-like energy of the great monarch with a certain languid softness of the eye. We cannot identify any of the extant busts of Alexander with the work of Lysippus,

but the busts in the Louvre and the Capitol may reflect his influence. Lysippus also represented the king on horseback, with his generals, in a



Fig. 52. Apoxyomenos, attributed to Lysippus.

great group illustrating the battle of Granicus. In collaboration with Leochares he represented Alexander at a lion hunt. It is probable that the beautiful marble sarcophagus found at Sidon and now in Constantinople contained the body of one of Alexander's officers, and that the reliefs were directly influenced by the groups mentioned above. The statues of athletes, mentioned as the work of Lysippus, were probably faithful portraits. We learn that his brother Lysistratus, in his desire for truthful rendering, took plaster casts from the faces of his sitters. The bronze head of a pugilist found at Olympia seems to illustrate the characteristic treatment of athletic statues in this age. The *Apoxyomenos* (Fig. 52), the nude youth scraping from his arm the oil and dust of the palaestra, represented for us by a marble now in the Vatican, is sometimes regarded as a type in which Lysippus embodied his canon of art as Polycleitus embodied his in the *Doryphoros*¹. In contrast to the square and massive proportions of the earlier artist, Lysippus, we are told by Pliny, 'made the head smaller, the body more lithe and dry, so that the slimness of the figure appeared greater': and 'whereas the ancient sculptors represented figures as they were, Lysippus represented them as they appeared to be.' This indication points to an improvement in technique as well as to the influence of painting, which reached its highest development in this age.

E. HELLENISTIC PERIOD (*circa* 320—31 B.C.).

333. The commissions executed by Praxiteles and Scopas in Asia Minor foreshadow the change that was brought about by Alexander's conquest. Athens retained her prestige and produced original work for a time, but her artists became more and more retrospective, and finally, under Roman domination, occupied themselves mainly with the commercial production of copies or imitative works. After the division of Alexander's empire the centres of progress shifted to the Hellenistic kingdoms, which enlisted the best workers of the day. **Bryaxis**, one of the sculptors of the Mausoleum, made temple-images for two of the new capitals: an Apollo for the famous sanctuary of Daphne near Antioch, and a Serapis for the artificial cult which Ptolemy Soter established at Alexandria. Of the pupils of Lysippus, **Eutyichides** broke fresh ground

¹ The question has been complicated by the discovery at Delphi of a marble statue, the ideal portrait of Agias, a famous athlete, which is thought to be a contemporary copy of the bronze statue of Agias made by Lysippus and set up in Thessaly. Its proportions recall those of the Lansdowne Heracles and other statues hitherto assigned to Scopas, and it lacks the advanced anatomical knowledge shown in the *Apoxyomenos*. We may either suppose that the Agias was an early work and that during Lysippus' long life he developed new methods, which is quite likely: or we may post-date the *Apoxyomenos* and regard it as a work of one of Lysippus' followers who had benefited by the anatomical studies which were first undertaken in the Museum of Alexandria.

with his bronze Tyche of Antioch, which survives in small copies, showing the city-goddess enthroned on a mountain, and the river Orontes, personified as a strong swimmer, at her feet. Another, Chares of Lindos, made the bronze Helios at Rhodes, which was over 100 feet high, and even after its overthrow by an earthquake was reckoned one of the Seven Wonders. The noblest work of this age which has come down to us is the Nike



Fig. 53. Niobid in the Vatican.

of Samothrace, which probably commemorated the naval victory of Demetrius (306). The colossal marble figure stood on the prow of a galley, her draperies blown back by the wind, a trumpet raised to her lips; and the effect was enhanced by the romantic scenery in which she was placed. In the same way the famous group of Niobe and her children, preserved for the most part in enfeebled Roman copies, was designed for

exhibition in wild natural surroundings. We possess a Greek version, perhaps the original, of one superb figure, and can understand why Roman critics thought the work worthy of Scopas or Praxiteles (Fig. 53).

334. The most important centres of Hellenistic art were Pergamum and Rhodes. Before describing the works of these and minor schools it will be convenient to deal with some general characteristics.

The majestic types of the Olympians had been fixed by fifth-century art. The fourth century, pushing characterisation further, distinguished the mild Asclepius from the stern-browed Zeus, and Zeus from his brother of fickle moods, Poseidon; and touched the goddesses with a human tenderness which is seen at its best in the Demeter of Cnidus. It remained for the Hellenistic age to invest these divine figures with a pomp of drapery and attribute analogous to those which distinguished the deified rulers of earth from their subjects. The sculptor of the Belvedere Apollo shuns the muscular athletic type which had contented democratic Greece, and substitutes slender aristocratic proportions and a theatrical pose of conscious authority. To enhance the splendour of rich draperies, the Pergamene sculptor insists that they are new by indicating the creases, crossing one another at right angles, that would be left in a freshly unfolded mantle. Phases of baroque extravagance alternated with returns to classic simplicity. Sometimes the imitation or modification of older types, combined with a heightened mastery of technique, resulted in such a masterpiece as the Aphrodite of Melos; the unknown sculptor of this type of noble womanhood, working as late as the second century, drew his inspiration from the grand style of two or three hundred years before.

Where all else is shadowy, one maker of colossal temple-images stands out as a distinct personality—**Damophon** of Messene, who worked in his native city, at Megalopolis, and in Achaia, during the brief spell of freedom which followed the downfall of Sparta (191 B.C.). We have considerable remains of an ambitious group, seen and described by Pausanias, which almost filled the little temple of Despoina near the modern Arcadian village of Lycosura: four colossal figures about fourteen feet high, Despoina and Demeter seated, two others standing. The modelling of the bodies, built up in many pieces, does not bear a close inspection, but the boldly chiselled heads have a breadth and grandeur which at one time led good judges to assign them to the early years of the fourth century.

335. Most of the Greek portraits in our museums are copies made for decorative purposes in Hellenistic and Roman times. Their usual form is that of the herm, in which the head and upper part of the chest rise from a square shaft; the bust was evolved by Roman art; but it must be remembered that in most cases the original was a complete statue, and that much of the character expressed in pose, gesture and dress, is lost in the abridgement. The series opens in the fifth century with helmeted heads of Attic strategi. That of Pericles is

Progress
of Portraiture.

probably derived from the bronze statue by Cresilas which stood on the Acropolis; only the turn of the head and slightly parted lips suggest the energy of the complete statue. Another Attic work of this time, the Anacreon Singing, exists both as statue and herm. The fourth century witnessed a gradual advance. In the well-known Sophocles (Fig. 154) we have the conventional, idealised exterior of a somewhat pompous citizen; the sculptor has not penetrated beneath the surface to reveal the poet's soul. The head of Plato, ascribed to Silanion, is a literal transcript from life; a later age found this and the cognate head of Socrates insipid and recast them in a more dramatic mould. We have already noted the portraits by Lysippus and Leochares, and the greater realism introduced by Lysistratus. Their influence may be seen in the life-like head recently identified as Aristotle, and the somewhat later Menander. The Demosthenes of the Lateran is an important landmark, for it almost certainly reproduces a statue by **Polyeuctus** set up in the agora at Athens in 280. It has gained in impressiveness through the discovery that the hands, formerly restored as holding a roll, were tightly clasped, in a pose expressive of failure and resignation. The realism of the worn, mobile face prepares us for later masterpieces of characterisation, such as the so-called 'Seneca' of the Naples Museum, the head of a literary recluse, haggard and unkempt. The sculptors of this period represented the sorrows of old age with special insight and sympathy, as in the Euripides, now at Copenhagen, whose deep-sunk eyes and cheeks tell of a sensitive nature long buffeted by the world, or the blind Homer, haunting in its pathological realism.

Very different are the portraits of men of action, for which the Lysippian heads of Alexander set a fashion; the leonine brow and clustering locks, the turn of the head and challenging upward gaze, became royal insignia among the Diadochi. Two bronze statues in the Museo delle Terme may be Hellenistic originals. One represents an unknown dynast in heroic nudity, leaning on a spear, the other a boxer of singularly brutal type, who sits resting after a bout.

336. The reliefs of preceding centuries, other than architectural pieces, were for the most part grave-reliefs, representing the dead person often attended by kinsfolk or servants, or votive reliefs, representing deities either alone or approached by worshippers. The rich series of Attic grave-reliefs was cut short by a sumptuary law, passed under Demetrius of Phalerum (317—307), at a moment when sculptors were beginning to introduce a personal note, individualising the features and allowing freer play to emotion. The development of the votive reliefs was in the same direction; localities are more fully indicated and particular incidents recorded. It was only a step to the landscape and *genre* reliefs, akin in subject and treatment to the cabinet-pictures designed for private houses, which are common in Hellenistic and Graeco-Roman sculpture. The subject might be mythological or

Hellenistic
reliefs,

drawn from real life, but in both cases the treatment was idyllic and there was often a landscape background. These rural scenes with their rocks and fountains, old gnarled trees and quaint roadside shrines, are the counterpart of the pastoral poetry which became popular in the third century. They have been claimed as Alexandrian, but there is at least as much reason to connect them with Asia Minor. Nor is it easy to distinguish the genuine Hellenistic examples from works in the same spirit executed in Campania or Rome in the first two centuries of the empire.

337. Pergamum is better known to us, thanks to excavation, than any other Hellenistic city except Delos. From 283 B.C. onwards the genius and wealth of its princes transformed a petty hill-fortress into a splendid capital. Sculptors were attracted

School of
Pergamum.



Fig. 54. The Dying Gaul.

from Athens and elsewhere to execute monuments of which we can form a good idea both from remains on the spot and from copies found in Italy. Attalus I (241—197 B.C.) adorned the city with bronze groups commemorating his victories over the Gauls, who for a generation had exacted blackmail from the states of Asia Minor. Some of them survive in excellent, perhaps contemporary, marble replicas; such are the Dying Gaul (Fig. 54), now in the Capitol, and the group representing a chieftain killing

his wife and himself, now in the Museo delle Terme. They are marked by an insight into racial characteristics and a sympathy for the heroic qualities of a barbarous foe which are new in Greek art. Attalus also dedicated a series of smaller bronzes on the Acropolis at Athens which showed the overthrow of the Gauls as the climax of successive struggles between civilization and barbarism. Copies of a dozen of these figures have been recognised in various museums; the subject is always a defeated Giant, Amazon, Persian, or Gaul, resisting with fiery energy or prostrate in death. Pliny names four sculptors as responsible for these groups, the most notable being **Antigonus**, who was also a pioneer in art-criticism; for the Attalids formed a collection of sculptures and paintings by great masters, which encouraged the critical study of art, just as the famous library fostered literary research. Among other works which may be assigned to the Pergamene school of the third century is a reconstructed group representing the punishment of Marsyas, who is shown hanging by his arms from a tree, while Apollo sits waiting and a slave sharpens the knife. This Scythian knife-sharpener, now in Florence, is treated with the same ethnological realism as the Gaulish warriors. The Marsyas, of which there are various replicas, is a masterpiece of anatomical detail; but the later versions betray that morbid interest in bodily pain which sometimes mars Pergamene and Rhodian sculptures.

338. The most important works of Hellenistic sculpture that have come down to us are the two friezes, now in Berlin, of the Great Altar built by Eumenes II (197—159 B.C.) on the acropolis of Pergamum. The principal frieze, from the exterior of the podium, represented the war of the gods and giants in high relief and on a very large scale, the height of the slabs being $7\frac{1}{2}$ feet, and the combined length about 350 feet, of which nearly three-quarters are preserved. The traditional episodes of the saga are woven into a crowded battle-piece of surpassing energy. The allied forces of heaven include the Olympians and many lesser deities, Rhea and Cybele with their lions, furies and gorgons, nymphs and satyrs in the train of Dionysus, Sun and Moon and other powers of the sky, the gods of the sea led by Poseidon and Oceanus, even the hounds of Artemis and the eagles of Zeus. Of the giants some are youths of superhuman beauty and strength, some winged, some semi-bestial with head of lion or bull, but most have human bodies with snakes in place of legs. The sculptors used to the full the opportunities offered by the varied forms and equipment of the combatants, the steeds and chariots and heavy robes of the gods, the spreading wings and scaly coils of the giants. The swift free movements of the victors are contrasted with the impotent writhings of the earth-born. One of the best-preserved groups (Fig. 55) shows Athena triumphant over Alcyoneus, whom she drags by the hair; Victory hovers beside her and from the ground Earth raises her head in piteous appeal for her children. The key-note of the whole is the victory of mind over brute force. From this

The Great
Altar of
Pergamum.

breathless scene of vengeance the spectator passed up a great flight of steps to the actual place of sacrifice, enclosed by a screen-wall on which the lesser frieze unfolded the story of Telephus, reputed founder of Pergamum, in a series of calmer scenes, enriched with suggestions of landscape.

339. The influence of Pergamene art was felt far beyond the limits of the kingdom. The Attalids undertook costly public works

Minor Asiatic
schools.

at Athens and sent gifts to the great Hellenic sanctuaries.

At Cyzicus, the native place of the wife of Attalus I, a temple built in her memory contained famous reliefs illustrating filial piety, which are described in the Anthology. Otherwise we know little of art at Cyzicus and can only suspect its influence in the Thracian and Euxine area; certain Hellenic types, current there at this time, afterwards passed by way of Danube and Rhine into the common stock of Roman provincial sculpture.



Fig. 55. From the Frieze of the altar of Pergamum.

Bithynia produced a native sculptor in **Doedalsas**, who worked in the latter part of the third century. His Zeus Stratios, the chief cult-image of Nicomedia, is only known through coins, but his Bathing Venus has been identified in the well-known statues of the goddess crouching as though under a fountain; there is a good copy in the Louvre. Another Bithynian, Boethus, will be discussed among the sculptors of Rhodes, since he seems to have settled there.

340. The arts as well as the sciences were encouraged at the splendid court of the Ptolemies, and we have evidence of original

Sculpture at
Alexandria,

achievements in painting, mosaic, and lapidary's work. But

our ancient authorities have less to say of sculpture, and the specimens found in Egypt are for the most part works of modest scale, suitable for the decoration of private houses. They include marble statuettes,

remarkable for the liquid softness of their modelling, and some bronzes and terra-cottas which treat *genre* subjects with a realism verging on caricature. The colossal figure of the Nile, now in the Vatican, may reproduce a public monument of Alexandria; the bearded river-god reclines in tranquil meditation, one arm propped on a sphinx, seemingly unconscious of the swarm of children, personifying the sixteen cubits of the Nile-flood, who sport about him or climb over his body (Fig. 56). A broader humour animates the reliefs on three sides of the base, which show the adventures of pygmies among hippopotami and crocodiles.

Mention has been made above of works executed by Bryaxis and Eutychedes for Antioch. The kings of Syria were more dependent for the embellishment of their realm upon Greek art than were those of Egypt, where a monumental native art already held the field; and the contributions of Syrian Hellenism to early
and at
Antioch.



Fig. 56. The Nile.

Christian architecture and sculpture were not less important than those of Alexandria. But until Antioch and other Seleucid cities have been explored, we cannot trace the early stages of this development.

341. From the second century onwards the chief centre of Hellenistic art was south-western Asia Minor and in particular the republic of Rhodes. The wealth of sculpture which adorned both the capital and the old sanctuary of Athena at Lindos is attested by Pliny and Dio Chrysostom and by numerous inscriptions. A native artist, **Philiscus** (second century B.C.), produced a group of Apollo with Leto, Artemis and the Nine Muses, which was afterwards in Rome. For his Muses he originated types which became popular in later antiquity.
School of
Rhodes.

They appear for the first time on a relief by Archelaus of Priene, the Apotheosis of Homer, now in the British Museum. Boethus of Chalcidion, who worked at Rhodes in the first half of the second century, produced *genre* works such as the boy wrestling with a goose, of which several versions exist. The same playful spirit appears in an archaistic bronze herm, bearing his signature, recently discovered in the sea off Tunis; it is crowned with a loosely knotted scarf, which is treated with the utmost naturalism so as to form a piquant contrast to the solemn bearded face of the old god. About many of these works there is a fluent, almost *rococo*, elegance which links them with the contemporary terracotta figurines of Asia Minor. A different spirit was brought into Rhodian art by sculptors trained in the Pergamene school. The group called the Farnese Bull, representing the vengeance taken by Amphion and Zethus upon Dirce, is derived from one carved by Apollonius and Tauriscus of Tralles; their adoptive father, Menecrates, seems to have worked on the Pergamene frieze. The extant group, found in the Baths of Caracalla, is a free copy of the Antonine age. It is pyramidal in composition, skilfully built up on a rocky background, but overloaded with accessory figures; the original was certainly simpler and more effective. We possess the original of another group, removed from Rhodes to Rome, representing the death of Laocoon and his sons (Fig. 57); it was the joint work of Agesander, Athanodorus, and Polydorus, members of an artist-family mentioned in several Rhodian inscriptions, and may be dated about 50—30 B.C. This, the last great achievement of independent Greek art, portrays the extremity of physical and mental anguish with every refinement that the accumulated craftsmanship of generations could suggest. The marvellous technique and profound if exaggerated anatomical realism go far to justify its fame.

342. On the mainland the sculptor's art tended to become hereditary.

Continuity of
the Athenian
school.

Sons and pupils carried on the traditions of the Lysippian school at Sicyon and the Praxitelean at Athens. Both devoted themselves to portraits (see § 335 above), for which there was an increasing demand even in impoverished states, and furnished versatile recruits to the Asiatic capitals where there was work to be done on a larger scale. The Sicyonians produced athlete statues for Olympia and can be traced far into the third century, down to Xenocrates, whose treatise on sculpture was one of Pliny's sources. The Athenian school preserved a certain continuity of academic tradition until the second or third century after Christ, resisting the extravagant tendencies of the Pergamenes and Rhodians, and transmitting to the Roman world an accurate knowledge of older styles. A sculptor-family, in which the names Eubulides and Euheir alternate, can be traced for five generations (*circa* 300—150 B.C.); fragments of a colossal group by Eubulides III have been found at Athens. In the same way Polycles and his descendants are known for four generations as makers of portraits and temple-statues (*circa* 200—80 B.C.); members of this family made images of Jupiter and Juno for the Greek temples built by

Q. Metellus Macedonicus in Rome, at some time between his triumph in 146 and his death in 115. It is mainly to Athenian sculptors that we owe the wonderful series of portraits of philosophers, men of letters, and other worthies

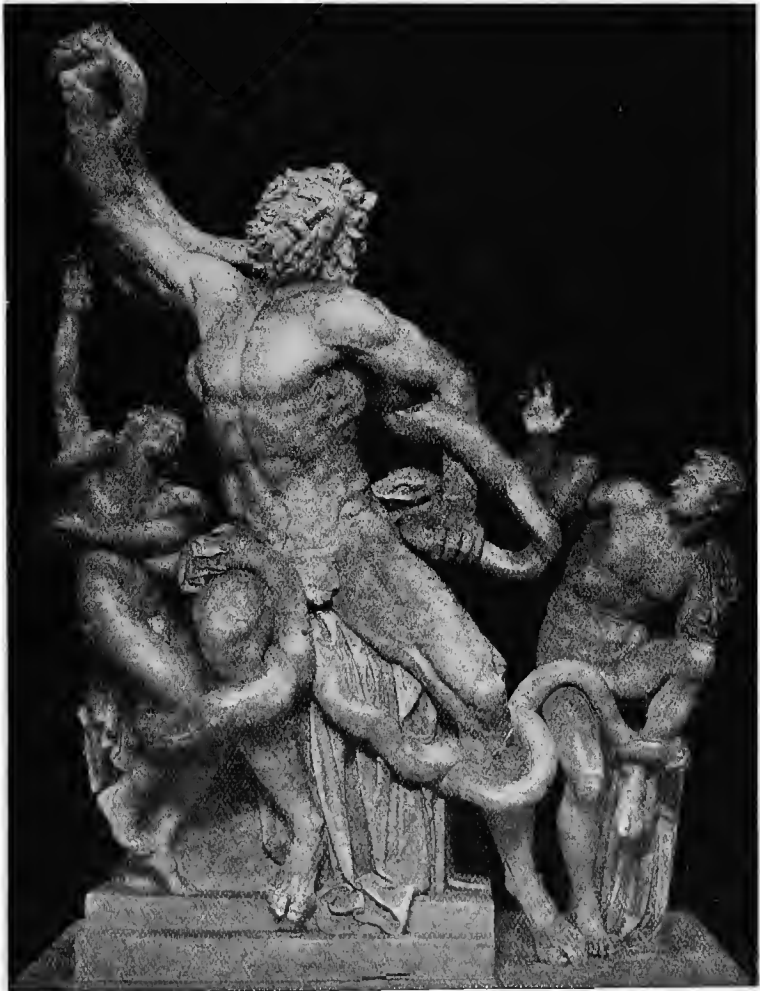


Fig. 57. Laocöon.

which were used to adorn Hellenistic and Roman libraries. Athens in the last century before our era was at once a centre of literary pilgrimage and a market for works of art, where copies, sometimes called Neo-Attic, were

turned out in great variety. Attic work of this age is seen at its best in the famous Belvedere torso, signed by Apollonius, son of Nestor, a colossal seated figure of surpassing force and technique, which many good judges regard as an original. The Farnese Heracles, signed by Glycon of Athens, and the marble vases by Sosibius and others are typical of the commercial side of the industry, which adapted and combined older themes. For altars, well-heads, candelabrum-stands and similar pieces, on which archaic designs were thought appropriate, Neo-Attic art evolved a bastard hieratic style, afterwards transplanted to Rome, where it diverged still further from its prototypes and was often employed for statues of the gods.

343. The Romans first became familiar with Greek art from Etruscan sources, then by direct intercourse with Sicily and Magna

Greek
sculpture
in Rome.

Graecia, which was intensified by the conquest of Campania.

The bronze Wolf of the Capitol is an Ionian work of the later sixth century, and we hear of Greeks modelling figures in terracotta for the temple of Ceres in 493. As Rome brought under her sway the cities of the Greek world, she seized their accumulated treasures. The spoils of Syracuse (212 B.C.), Tarentum (209), and Eretria (198), were followed by the collections of Pyrrhus (187) and Perseus (168). Mummius in 146 plundered Corinth and Thespieae, Sulla shipped many masterpieces from Athens and other cities in 84. What the conquerors left was gleaned down to the close of the Republic by governors of the stamp of Verres. Even before the acquisition of the Pergamene kingdom in 133; statues by Pheidias, Scopas, Praxiteles and Lysippus were to be seen in public places in Rome. Romans of the governing class began to pride themselves on Greek culture and to form collections under the advice of Greek experts. Hitherto Roman buyers had sent their commissions to Athens. The Tunis Museum has recovered from a wreck of about 80 B.C. what may have been a typical cargo, perfunctory copies of statues in marble, decorative marble vases, some relics of an earlier age looted from temples near Athens, fine bronzes and miscellaneous furniture. But a few years afterwards some eminent Greek sculptors had their studios in the capital. **Arcesilaus**, the friend of Lucullus and Varro, whose group of Cupids playing with a lioness is praised by Pliny, received enormous prices even for his sketches in plaster. **Pasiteles**, at once a sculptor and writer on art, *qui et quinque volumina scripsit nobilium operum in toto orbe*, modelled all his works in clay, as is the modern practice, and made conscientious studies from life. We may perhaps recognise his influence in the marvellously life-like modelling of the later Republican portraits, and may certainly credit him with raising the standard of connoisseurship. An extant work signed by 'Stephanus, pupil of Pasiteles,' is an accurate copy of a Peloponnesian athlete-statue of the early fifth century.

F. GRAECO-ROMAN PERIOD (31 B.C. *onward*).

344. Under Augustus the stream of classical art divides. On the one hand it enters a new region, leaving academic traditions behind, and broadens out to mirror the life of the new empire in that Roman imperial sculpture which excelled in portraits and historical reliefs¹. On the other hand there is an increased

The academic tradition under the Empire.



Fig. 58. Marble Relief of Antinous.

¹ The independent development of Roman Sculpture is treated in the *Companion to Latin Studies*, § 835 ff.

production of copies and imitative works; extant replicas of popular pieces, such as the Satyr of Praxiteles, which were in demand for the decoration of houses or gardens, can be counted by the dozen; and the admiration felt for works of primitive style continued to inspire 'archaistic' imitations. The copyist's art was at its best under the Julio-Claudian house and gradually deteriorated. There was a brief revival under Hadrian; some of the numerous sculptures which record the beautiful melancholy features of Antinous have a dignity and grace worthy of Hellenic traditions (Fig. 58). The leading sculptors were still men of Greek or Asiatic blood, and it was in the old seats of Hellenistic culture that Christian art was destined to have its birth.

Text-books: E. A. Gardner, *Handbook of Greek Sculpture*, and *Six Greek Sculptors*; H. B. Walters, *The Art of the Greeks*. Longer works: Bibliography. M. Collignon, *Histoire de la Sculpture Grecque*, 2 vols.; A. Furtwängler, *Masterpieces of Greek Sculpture*; W. Klein, *Geschichte der Griechischen Kunst*, 3 vols. Illustrations: Brunn-Bruckmann, *Denkmäler griechischen und römischen Skulptur* (over 700 large photographs, in progress, the recent parts with critical text); Hirth, *Das schöne Mensch*, Part I. *Altertum*, with critical text by Bulle; S. Reinach, *Répertoire de la Statuaire grecque et romaine* (small outline drawings forming an index of almost all known statues), and *Répertoire des Reliefs grecs et romains*; Conze, *Die attische Grabreliefs*; Th. Schreiber, *Die hellenistische Reliefs*; A. Hekler, *Greek and Roman Portraits*; J. J. Bernoulli, *Griechische Ikonographie*, 2 vols.; R. Delbrück, *Antike Porträts*. For the sculptures found at Delphi, Olympia and Pergamum the official reports on the excavations should be consulted. For Athens, G. Dickins, *Catalogue of the Acropolis Museum*; A. S. Murray, *Sculptures of the Parthenon*; Sir C. Waldstein, *Essays on the Art of Pheidias*; and the British Museum publications. A useful survey of the sculpture in the Roman Museums is given in H. Stuart Jones' *Classical Rome*; see also the same writer's *Catalogue of the Sculptures of the Museo Capitolino*, and W. Amelung, *Die Sculpturen des Vaticanischen Museums*. The ancient authorities are collected in Overbeck, *Die antiken Schriftquellen zur Geschichte der bildenden Künste*, and H. Stuart Jones, *Ancient Writers on Greek Sculpture*.

IV. 4. PAINTING.

345. As we possess no first-rate examples of Greek painting, our knowledge of the subject is chiefly derived from the statements of ancient writers, of whom Pliny is the most important. His short sketch of its history (*N. H.* xxxv) is supplemented by incidental notices in the works of other writers, such as Pausanias and Lucian, who is perhaps the best of ancient critics. The statements of these authorities are, however, supplemented and corrected by certain existing works of art, which, though they belong to the humbler forms of

Sources of knowledge.

painting, often give valuable evidence. Of these the most important are Greek vase-paintings and Roman and Etruscan wall-paintings. Vases, since many of them date from the best period of Greek art, are our most trustworthy witnesses, but for obvious reasons their evidence is restricted to matters of composition and drawing. In these the best of them are inimitable, but of colour they tell us nothing, and for this reason their value decreases with the advance of painting; and after the fifth century they diverge too far from independent painting to be safe guides. The Roman wall-paintings, on the other hand, are remarkable for their colouring, and as they follow Greek traditions, and often reproduce, with more or less freedom, Greek originals of an earlier period, they offer useful evidence for the study of pure Greek painting. Besides these two classes there have lately been discovered a number of portraits on Egyptian mummy-cases, which are Greek in style, though, like the Pompeian paintings, they belong to the Roman period, most of them probably to the second century A.D. Many of these are encaustic, and give us a high idea of the capabilities of that process.

Finally our materials have lately been increased by the discovery of a large number of painted *stelae* at Pagasae in Thessaly. Nearly a hundred of these retain considerable traces of painting and many are well preserved. They apparently belong in date to the third century B.C. and are executed in encaustic directly upon the marble. In subject and composition they reflect, with some modifications, the sculptured monuments of Attica, and therefore can hardly be taken as direct representatives of independent painting, even though their discoverer believes, on the evidence of the subjects represented, that some of them may be derived from works of the Sicyonian school mentioned in literature. Their artistic value in most cases is not great, but they furnish fresh evidence as to the nature of the encaustic process. In them the paint appears to have been laid on with a spatula, not with a brush. In style and treatment they appear, when allowance is made for their monumental character, to confirm the conclusions reached from other sources. But a final judgment is not possible till they have been more adequately published.

346. The Greeks appear to have employed three methods of painting, fresco, tempera, and encaustic. The first of these, fresco, or painting on wet plaster (which fixes the colours when it dries without the aid of any other medium), was employed for the decoration of walls. There are many examples of it at Pompeii and elsewhere which show a degree of skill in the manipulation of this difficult process fully equal to that of the mediaeval Italian painters. The date at which this process was discovered is however uncertain. The existing remains of the fifth century (*e.g.* the Lesche at Delphi) are executed on the dry plaster, and after that encaustic is the method usually employed. Nevertheless the skill of the Greco-Roman painters shows that the fresco process was no new invention. The usual process for easel pictures appears

Technical
methods.

to have been tempera. The practice of ancient painters in this process probably differed in detail from the mediaeval, but was essentially similar, in that both used a sticky medium, such as yolk of egg, and not oil. The encaustic process is no longer employed, and its nature is uncertain. Its peculiarity was that the colours were mixed in wax, which sometimes at least was heated before application to render it fluid. Besides the brush an instrument called a 'cestrum,' probably a kind of spatula, was used for laying on the stiff pigment. This process appears to have been slow and difficult, but it had the advantage of depth and richness of colour, and may in some measure have filled the place of modern oil-painting. The earlier Greek painters used few pigments, but by the time of Apelles they possessed a very adequate palette. Taking all the evidence together, we cannot place their technical resources very much below those of the great painters of the Renaissance.

The history of Greek painting may for convenience be divided into five periods, (1) the Primitive, before 500 B.C., (2) the Polygotan, to the time of the Peloponnesian War, (3) the Transition, about the last quarter of the fifth century, (4) the Fourth century, (5) the Hellenistic period. The reasons for this division will be apparent later.

347. The first of these periods may be dismissed briefly. The so-called Mycenaean period was until lately represented by fragments of wall-paintings at Tiryns and Mycenae, executed in several colours on a white ground. The best of these, representing a man catching a bull, is spirited, in spite of incorrect drawing. But recent excavations at Cnossus in Crete have revealed several frescoes more perfectly preserved than any on the mainland. They embrace a variety of subjects, and are said to show a naturalistic freedom even more remarkable than that of the other works of this period. Unfortunately they have not yet been reproduced in an accessible form. Then comes a gap in our records only filled by vases and a few terracotta plaques and some shadowy names of artists. None of the latter appear to have lived earlier than the seventh century B.C., and the stories told of them are untrustworthy. In all probability their work differed little except in size and finish from vase-paintings, and through vases we may trace the gradual advance to the freer style of Polygotus, in whose great works painting first took rank with sculpture as an independent art.

348. Polygotus, whose father Aglaophon was himself a painter, was a Thasian by birth, but came to Athens in the time of Cimon. Here he adorned the walls of several public buildings with paintings of mythological subjects, among others a Sack of Troy in the Stoa Poecile, and a Rape of the Leucippidae in the shrine of the Dioscuri. But his most famous works were two in the Lesche at Delphi, the Sack of Troy, and Ulysses in the Underworld. These were large compositions, each containing at least seventy figures, and probably covered the walls of the building. There was in these no

Primitive period.

Second period.
Polygotus.

complete landscape background to the scene, but only slight indications of locality, such as a rock, a tree, a house, or the like; and the unity of effect depended therefore on the balance of groups and single figures, which were arranged with careful symmetry. The conception was grave and serious as befitted the subjects and the monumental character of the work. The greatest advance made by Polygnotus was in the treatment of the human face, which he freed from the rigidity of earlier Art, giving it for the first time life and expression. In this he anticipated sculpture, and there can be no doubt that he and the other great painters of his time strongly influenced the sculptors of the succeeding Periclean period. His skill in the treatment of the face enabled him to become a master in the expression of character, for which he is praised by Aristotle and other writers beyond

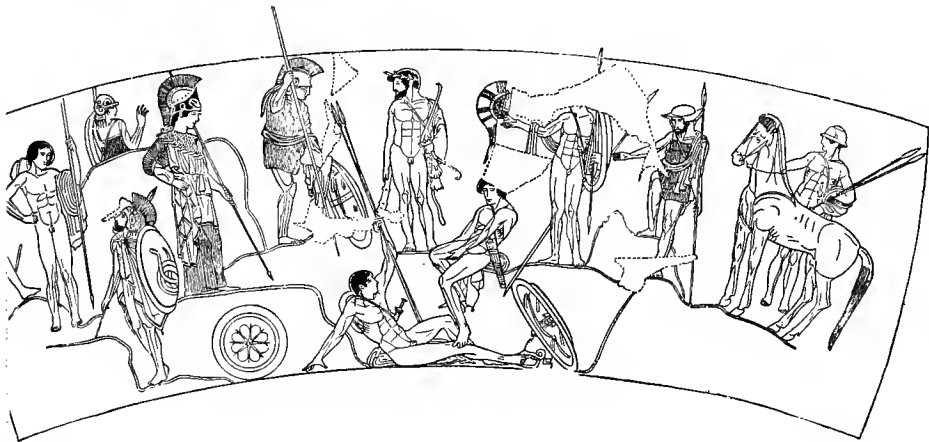


Fig. 59. Vase illustrating the style of Polygnotus.

all other painters. His colouring was simple and without any play of light and shade, but must have been skilful, for Lucian selects for special praise the complexion of Cassandra in the Sack of Troy; he was also admired for his refined and studied treatment of drapery, a trait which is illustrated by many vases of the period. The two most famous contemporaries of Polygnotus were **Micon** and **Panaenus**, the brother of Pheidias, for whom he executed the paintings on the throne of Zeus at Olympia. Micon and Panaenus seem to have shared the painting of the famous Marathon of the Stoa Poecile. In the same place Micon executed alone an Amazonomachia, in which the Amazons appeared on horseback. In style these painters probably resembled Polygnotus, but in the opinion of all critics he stood alone in grandeur of conception. All of them however were inspired by the patriotic enthusiasm which was called forth by the Persian Wars (Fig. 59).

Micon and
Panaenus.

349. About the end of the fifth century there was a transformation in the character of Greek painting. Large monumental compositions gave way to easel pictures, and with this change came a great advance in the treatment of colour and chiaroscuro.

Third period.
Transition.

The figure was given relief by means of light and shade, and the study of perspective made possible a more natural treatment of the landscape background. Thus the painter was able to attain to a much closer imitation of natural effects. There was also a change in spirit. Mythological subjects still predominated, but the artist's first aim was no longer to tell the story but to produce a beautiful picture from the elements which it offered. The way had been prepared for this change by previous artists, notably by Apollodorus of Athens, but the first great masters of the new manner were,

Zeuxis and
Parrhasius.

Zeuxis of Heraclea and Parrhasius of Ephesus, who lived at the time of the Peloponnesian War and probably till the early years of the fourth century. Both alike showed

the characteristics of the new school, but Zeuxis was noted more especially for the novelty of his conceptions and the wonderful beauty of his female figures; Parrhasius for his fine drawing, his exquisite care in the treatment of the face, and his power of rendering the emotions. The Helen of Zeuxis in the temple of Hera at Croton, which was famous for the incomparable beauty of the nude figure, is characteristic of his art. No less so is the 'Centaur Family' described by Lucian (*Zeuxis*). Among the works of Parrhasius the picture of the Athenian people was admired for the skill with which the artist had expressed in the single figure of Demos all the conflicting qualities of that inconstant personage. The subjects of his other pictures, e.g. The Madness of Ulysses, Philoctetes, Prometheus, offered scope for the subtlety of expression which marked his art. A

Timanthes.

contemporary and rival of these painters was Timanthes of Cythnus (or possibly of Sicyon), who on one occasion carried away the prize from Parrhasius. His masterpiece was the sacrifice of Iphigenia, a work highly praised by ancient writers for the wonderful expression of different degrees of grief in the faces of the spectators. It is possibly the original of a picture discovered at Pompeii.

350. This period is not sharply distinguished from the preceding, but is marked by the rise of separate schools which in different

Fourth period.
Fourth cen-
tury.

ways developed the new manner and added to the stock of technical knowledge. These schools were the Sicyonian, Attic, and Ionic. In painting, as in sculpture, the Sicyonian school was marked by the careful study of the theoretical and technical parts of Art. It was founded by Eupompus at the beginning of the century. His pupil Pamphilus, celebrated for his varied attainments and particularly for his profound study of artistic theory, was the teacher of three great masters, Apelles, Melantheus and Pausias. Only the two latter belong properly to the Sicyonian school, and of

Sicyonian
School.

Melanthius we know little. Pausias was an encaustic painter and excelled in small pictures, especially of flowers and children. His strength lay in colouring and chiaroscuro, and the most famous example of his skill in this was the black bull in a picture of a sacrifice. It stood facing



Fig. 60. Painting on marble from Herculaneum, signed by Alexander the Athenian. Probably after an original of about 400 B.C.

the spectator, but in spite of this and the added difficulty of its colour, he succeeded perfectly in giving it due relief. He seems to have sought out such problems, and no doubt the encaustic process, of which he was

the first great master, helped him in their solution. He is noteworthy as the first painter of *genre* pictures. Pausias left several pupils, of whom we know little, and the Sicyonian school maintained its reputation till the time of Aratus in the middle of the third century. Its continuity of tradition and the solid technical training, which Plutarch describes by the word *χρηστογραφία*, preserved it from decay longer than the rest.

As our authorities are not explicit on this point there is a doubt whether all the painters now to be mentioned belong to one school, but they possess certain qualities in common which makes it convenient to treat them together. Ancient writers ascribe many paintings to a painter Aristeides, but as they appear to have confounded two painters of this name, of whom one lived at the beginning of the fourth century, the other in the time of Apelles, we can form no distinct idea of either. One of the pictures so ascribed however deserves notice. It represented the sack of a town, and the leading motive was the figure of a dying woman with an infant at her breast. The choice of such a subject is characteristic, and shows that the love of a dramatic situation, manifested already by Parrhasius and Timanthes, grew more powerful in the fourth century. Nicomachus, son and pupil of the elder Aristeides, was a painter of repute about the middle of the century. He seems to have preferred mythological subjects, especially those which offered scenes of vigorous action, e.g. the Rape of Persephone. He was celebrated for rapidity of execution. Another pupil of Aristeides, equally famous in sculpture and in painting, was Euphranor, who is constantly cited as the type of versatile genius. It is remarkable at this date that his most famous works were wall-paintings. They were in the Stoa of Zeus Eleutherius at Athens, and represented Democratia and Demos, the Twelve Gods, and the cavalry battle before Mantinea. Plutarch praises the last highly for its vigour and life. Euphranor said of his Theseus, who appeared in the first of the series, that he was fed on beef, whereas the Theseus of Parrhasius was fed on roses, a remark which illustrates the increased realism of the time. Of Euphranor's many pupils we know little, but one of them, Antidotus, was the teacher of Nicias, an Athenian and one of the greatest painters at the end of the fourth century. He excelled in female figures, and two of his paintings of mythological heroines, an Io and an Andromeda, are perhaps reproduced in various Pompeian frescoes, which give us a high idea of the grace and refinement of their original. He also painted, like Polygnotus, the Underworld, but his treatment was doubtless very different, especially as we hear that he was a master of chiaroscuro. It is to be observed that the painters of this school showed a preference for mythological and dramatic subjects. So much may be inferred from the lists of their works furnished by Pliny and others. Moreover the praises accorded to them by ancient critics relate chiefly to qualities of expression rather than technique. In these two points lies their difference from the painters of the Sicyonian school.

351. The two chief painters of the Ionic school were Apelles and Protogenes. Apelles, the greatest of all ancient painters, was born at Colophon, probably between 370 and 360 B.C. He studied first at Ephesus under Ephorus, and later at Sicyon under Pamphilus. It was no doubt here that he acquired that perfection of execution which was one of the charms of his work, but he was not confined by the rules of any single school, but took from each what was needed for his development. The subjects of his pictures mark a new departure, for most of them were portraits, a branch of painting little cultivated before. It became popular now through the influence of the Macedonian court, the chief members of which he frequently painted. These appear, however, rarely to have been simple portraits, but received an additional dignity and interest from the introduction of artistic motives. Apelles was fond of placing his figures on horseback, and in his portraits of Alexander he often presented him in the company of divine persons or personifications. Thus he painted him with the Dioscuri, and riding in triumph with War in chains beside him, and again wielding the thunder-bolt; the wonderful relief of the hand which held the bolt was specially admired. He seems to have had a taste for allegory and personification, which he carried far in the elaborate picture of Calumny described by Lucian. Herein he anticipated the taste of the next age. His mythological pictures were few, but his Aphrodite Anadyomene was by far the most famous picture of antiquity. Its motive is uncertain, but its charm lay in the beauty and grace of the nude Aphrodite, who was wringing from her hair the water of the sea from which she had just risen. It seems to have resembled in spirit the Cnidian Aphrodite of Praxiteles. The distinctive qualities of Apelles' work appear to have been perfection of finish combined with the perfect ease which came of absolute mastery of technique, and above all a certain grace and charm peculiar to himself. This quality of χαρις was claimed by Apelles himself as his peculiar merit, and his judgment was confirmed by critics. He does not seem to have been remarkable for creative imagination and cannot therefore be called the greatest of painters in quite the same sense that Pheidias was the greatest of sculptors. Indeed it was impossible for any painter to combine the highest technical skill with the highest imaginative qualities, for painting only reached technical completeness when the creative power of Greek Art was already declining. Protogenes, a painter of the same period and also a native of Asia Minor, was declared by Apelles equal to himself in all but ease of execution. He worked chiefly at Rhodes, and his masterpiece was a picture of Ialysus, the eponymous hero of the Rhodian city, on which he is said to have spent seven years. Another picture equally famous presented a satyr leaning at ease against a pillar with a shepherd's pipe in his hand, a pose which recalls the satyr of Praxiteles, the so-called 'Marble Faun.' He also painted portraits, including an Alexander with Pan. His work was extremely lifelike and marked by extraordinary finish, but the intense

Ionic School.
Apelles.

care he spent upon it rendered the effect somewhat laboured. If we may trust the story which connects him with Demetrius Poliorcetes, he must have lived at least to the end of the fourth century.

352. The great age of Greek painting ended with Apelles, but there were some interesting developments in the time of the Diadochi. We notice the beginnings of these in the work of **Antiphilus**, a painter whose tendencies connect him with this period, though he seems to have lived earlier, for

Fifth period.
Hellenistic
painting.

he painted portraits of Philip and Alexander. He worked both in encaustic and tempera and was versatile also in the choice of subjects, for he painted mythological scenes, portraits and *genre*. One instance of the latter was a picture of a boy fanning a fire, the light illuminating his face and the room about him. In another picture he painted women spinning. These, and a picture of the death of Hippolytus, a somewhat sensational subject, mark his connexion with later artists. He was remarkable for facility of execution. **Theon** of Samos, called also Theorus, was famous for pictures of a highly realistic and sensational character, which were called *φαντασία*. One of these represented a hoplite charging, and before exhibiting it the painter always caused a trumpeter posted near to sound the charge, upon which the curtain was suddenly withdrawn. This desire to produce illusion by a sudden and overpowering effect was new in Greek Art, but we find the same spirit in the sculpture of the later period, especially in the Pergamenian frieze of the Gigantomachia.

Another characteristic of this period is the development of *genre*, the popularity of which is attested by many Pompeian paintings based on Greek originals. Of the artists who practised it the best known is **Peiraeicus**, who painted 'barbers' and cobblers' shops, asses, eatables and the like,' and was called 'rhyparographus,' a malicious perversion of *ῥωπογράφος*. These humble subjects, which must have owed their attraction mainly to the execution, mark an increased love of realism, when compared with those of the earlier *genre* painters, Pausias and Antiphilus, whose subjects had an interest apart from the treatment. But even so Greek painters, to judge from existing remains, never lost their love of representing the type, rather than the individual, and thus differed from later realists.

These were the two most important new growths in later Greek painting. Even as late as the early Roman Empire painters retained a high degree of technical skill, but they did little more than vary the motives of earlier artists. Two painters only deserve mention. **Timomachus** of Byzantium, whom Pliny ascribes to the age of Julius Caesar, though some modern writers would place him earlier, seems to have reverted to the severer spirit of the painters before Alexander. His masterpieces were pictures of Ajax after his madness, and of Medea meditating the murder of her children, in which he seems to have expressed powerfully the dramatic and psychological interest of the subjects. The Medea is

probably reproduced by a picture at Pompeii, one of the finest discovered there. The subject is treated with much restrained power. All centres in the highly expressive face and pose of Medea, who stands quietly with her hands painfully pressed together. Besides these and other mythological pictures, Timomachus also painted portraits. Another painter, Ludius (or perhaps Tadius), a contemporary of Augustus, deserves a passing mention. He introduced a new style of decorative landscape for the adornment of walls. The subjects of these were 'villas, porticoes, gardens, groves, hills, lakes, harbours,' and similar scenes. These were mingled together in profusion and enlivened by the addition of figures, the whole producing a light and cheerful effect. The many examples of such scenes in Pompeian painting perhaps reflect his style. They are pleasing



Fig. 61. Woman's head from the Crimea. Late fourth century B.C.

and effective as decoration, but show little regard for truth to nature and none for perspective. Landscape had already been employed for a similar purpose by the Greeks, and we do not know wherein Ludius' innovation lay. The earlier Greek style of decorative landscape is probably represented by the fine paintings of scenes from the *Odyssey* discovered in a house in the Esquiline. These and some of the landscape backgrounds in pictures after Greek originals show a considerable knowledge of natural effect, but the Greeks seem never to have cultivated landscape as an independent art.

Any account of an art based, as that of Greek Painting must be, chiefly upon literary records, is inevitably unsatisfactory; for it cannot enable the

reader to visualize the works described. Yet the records here summarized, when compared with the monuments, suggest certain conclusions which it will be useful to collect.

We see in the first place that Greek Painting followed the same course of development as Sculpture. It is at first, in the hands of Polygnotus and his contemporaries, monumental, dealing with heroic and mythological subjects, usually on a large scale, but relying for its effect on the beauty and dignity of the individual figures, with at most a linear symmetry, as on a relief.

The figures, though ranged at various altitudes and not merely in rectilinear rows, and though sometimes overlapping, or partly concealed by the background, are still virtually conceived on one plane. The principle of composition is not yet truly pictorial; there is no serious attempt to express a third dimension; the background is quite subordinate, and effects of light are unknown. It is still coloured drawing; probably of great delicacy and dignity, but not different in principle from sculpture in relief.

In the next period we have the beginnings of a more pictorial style. It is clear that Zeuxis and Parrhasius, in their innovations, though some of these, as Sculpture shows, were dictated by the spirit of the times, were in part guided by artistic motives. They desired to give relief to their pictures; they become conscious of light, and of a third dimension. Colouring becomes more naturalistic, and the background and accessories more important. And these characteristics are carried further by Pausias and later painters. It is probable that even they, to the modern eye, would seem a little sculpturesque. The human figure always predominated, and its beauty or expressiveness is the chief theme of praise; light and atmosphere and landscape are usually subordinate. But on the other hand literary records and monuments, so far as they go, alike prove that before the period of decline Greek Painting had developed beyond the stage of coloured drawing. The knowledge of perspective, linear and atmospheric both, is still incomplete, but the principle of composition is now more truly pictorial.

The painter attempts to give his picture depth and conceives it in a definite light. Light and space, in other words, become positive elements in composition. It would even appear that in some cases the painter's interest centred rather in light and colour than in form. Some modern writers indeed believe that this stage was not reached till late in the Greco-Roman period, but the evidence seems to prove conclusively that the Greek painters of the fourth century were already more conscious of light and colour as living elements in a picture than any painter of the Italian Renaissance before Leonardo, though in scientific knowledge of perspective they may have been inferior. The change of style, here ascribed to the fourth century, is illustrated to some extent by a comparison of Figs. 60 and 61. The characteristics of the later period are still better illustrated by the Pagasaean *stelae*, of which no good reproductions are accessible.

The most complete modern account of Greek painting is to be found in Brunn's *Geschichte der griechischen Künstler*, Vol. II. A popular sketch is given by M. Paul Girard, *La Peinture Antique*. The English translation of Woltmann and Wörmann's *History of Painting*, and the article 'Pictura' in Smith's *Dictionary of Antiquities*, contain useful information, and the latter a Bibliography of the subject. Bibliography.

On the Pompeian paintings, which should be studied by all who wish to form a definite idea of the powers of ancient painting, the standard publication is still Helbig's *Wandgemälde der verschütteten Städte Campaniens* (Leipzig, 1868). Of reproductions the best is the series of *Denkmäler der Malerei*, ed. P. Hermann, Bruckmann, Munich (in progress). Of the Pagasaeian *stelae* the best accounts yet published are to be found in the *Ephemeris Archaeologica* for 1908 (Arvanitopoulos) and the *Ath. Mittheilungen* 1910 (P. Rodenwaldt). Upon questions of technique *Greek and Roman Painting*, A. P. Laurie, Cambridge 1910, may be consulted.

IV. 5. VASE PAINTING.

353. MYCENAEAN art and culture decayed and died out, at an uncertain period, about 1000 B.C. The traces of an artistic tradition surviving into later times are doubtful and local (as at Tiryns and Salamis), and on some sites there is evidence of a continuous occupation. Geometric Art.



Fig. 62. Pyxis of Geometric Ware.

The period of change and political disturbance, represented by the Dorian Migration, was followed by a new development of art. In pottery the new style is known as Geometric, since the predominant decoration is of a linear and geometric character. In particular, it is rich in variations of the Maeander (or Greek Key) pattern, which does not occur in Mycenaean art. The surface of the vase is apt to be closely covered



Fig. 63. Vase of Geometrical Style. Subjects: a funeral procession and mourners. A procession of chariots.

with rich designs, arranged in panels, symmetrically disposed (Fig. 62). Vases of the style in question were first found in numbers near the Dipylon gate at Athens, and are hence called Dipylon vases.

In the later examples of the group there is a gradually increasing use of human and animal figures, at first in panels and afterwards in bands. The figures are mechanically drawn, according to a conventional system, the

heads and bodies being little better than triangles, and the limbs black strokes. The highest level of achievement is represented by certain large vases, with scenes of funeral processions and mourning (Fig. 63). The geometric style is believed to have survived as late as the eighth century B.C. In its later development (known as the Phalerum style, because examples were found on the road from Athens to Phalerum) the geometric ornament becomes subordinate, and preference is given to figures of animals, and the like.

354. Oriental influence had before this date begun to have its effect on Greek art. In part by the agency of the Phoenicians (whose activity has been underestimated by some recent writers) and in part through those communities that were most in touch with the East, such as Ionia, Cyprus and Rhodes, oriental

Oriental
types.



Fig. 64. Corinthian Pottery.

types were introduced. We meet with winged figures and animals such as Chimaeras, Gryphons, Pegasi, and Sphinxes. To some extent these types, especially Gryphons and Sphinxes, had been familiar also to the artist of the Mycenaean period. How far historical Greece inherited them, and how far it borrowed them afresh from the East cannot yet be stated with certainty.

It was also characteristic of many of the early vase painters that these types, together with panthers, lions, cocks and the like, were combined in closely packed friezes, in which the interspaces of the field are filled up with rosettes, wheels, lotus buds, and other decorations. An explanation of this system of decoration has often been sought in the supposed designs of oriental embroidery.

In its extreme form, this style is represented by the 'Corinthian' wares

(Fig. 64). This name has long been given to a well-defined group of pottery, of which some leading examples were found in the neighbourhood of Corinth. But a similar tendency towards irrelevant decoration is also found in other early wares such as the early Attic 'Vourva' ware, the Rhodian wares (Fig. 65) and in the so-called Proto-Corinthian group, which is rather a series parallel to the Corinthian wares, though earlier on the whole.



Fig. 65. Rhodian Plate. Subject: Winged Gorgon.

As these vases develop in style the oriental element recedes: they approach in character the black-figure vases, and thus form a transition to the vases of fully-developed historical art.

355. During the seventh century B.C., the potters of many different localities were working on independent lines. They were gradually attaining to a fuller power of expressing the human figure, and of representing incident. They also began to

connect their artistic types, many of which had been inherited in an impersonal form, with subjects derived from the epic poems or mythology. At some period which cannot be exactly dated, but probably about the beginning of the sixth century B.C., the Athenian and Corinthian potters introduced a series of improvements, and by degrees the Attic school took the lead. Hitherto it had been one school among many rivals, whose mutual relations are singularly difficult to trace, but it now assumed an easy supremacy. The various local schools became insignificant, while the Athenian export trade increased. It was only at a much later time, when Athenian industry began to decay, that the manufacture was seriously taken up in South Italy and other outlying districts.

356. The material improvements, fully developed by the Athenian potters, were two. They introduced the use of the fine clay, coloured to the familiar tint intermediate between red and orange; and they perfected the equally characteristic lustrous glaze, rich black at its best, but sometimes tending towards olive green or brown. With the introduction of the brilliant glaze came the careful study of lines engraved with a sharp metal point in the black glaze so as to show the ground colour below. Occasionally in older wares, especially in those of Corinth (Fig. 64), the lines are incised in the dark figures to add internal details, or to define parts of the outline. For the most part, however, though there are some notable exceptions, the incised work is singularly rough and hasty. The Athenian painters began to practise the use of a point, worked with the careful precision of an engraver, and acquired both the skill of draughtsmen, and the power of expressing minute details in the internal drawing of the black figures. Other colours were also added after the firing of the black, and were fired at a lower temperature, for which reason they have often disappeared. White was freely used for such objects as linen garments, etc., and especially for the flesh colour of women. For while the artist was ready to accept the convention of black, marked with incised lines, for the male figures, he seems disinclined to use it for the women. Finally, a ruddy purple was freely used for helmets, draperies, etc., and in a quite conventional manner for hair, beards, and parts of animals (compare Fig. 66).

357. The productions of the Athenian black-figure potters may be briefly described as belonging to the following classes: (1) a period of archaic simplicity; (2) a period of comparative freedom, followed by (3) alternatively, an affected conventionalism, or an attempt at freehand treatment, of which neither the artist nor his methods were capable. In (1) the draperies and figures are alike conventionally treated. Especially the women's dresses hang in stiff straight lines to the feet, without creases. The figures are either in profile or straight to the front. The composition is elementary, with numerous small figures. In (2) there is greater freedom in the action, and considerable power of representing the nude male form in varied and

Black-figure
Style.
Methods.

Black-figure
Style.
Subdivisions.

vigorous position. The draperies reflect something of the movement of the figures. The composition is less mechanical. At the same time it becomes simpler and more dignified, with a reduced number of figures represented on a larger scale. In (3), which appears to represent the



Fig. 66. Black-figure Amphora. Subject: Hermes leading the goddesses to Paris.

latest period, two tendencies are at work. Either there is an affected formality which seems to reflect the earliest period, combined with an extraordinary elaboration of small details expressed by the incised line (compare especially the vases of Exekias); or the execution becomes

careless and rough. In part this occurs on small vases of slight and hasty work, but in part it seems to be due to a school seeking freedom by a wrong path.

358. In one considerable class of vases, namely the Panathenaic amphorae, the conservative influence of religious custom preserved the use of the black-figure style for more than 150 years after it had ceased to be practised for ordinary purposes. These vases, which contained the oil won by victors in the Panathenaic games, were of a fixed type. On the one side were an archaic figure of Athena, standing, usually between two Doric columns, and the inscription, written columnwise, *τῶν Ἀθηνῆθεν ἄθλων*. On the other side is an agonistic scene. Some of the vases are genuinely archaic, but others can be dated between the years 367 and 313 B.C. by the names of the Archons, which are also inscribed.

Panathenaic
vases.

359. The range of subjects represented on the black-figure vases is not large, when considered in relation to the number of vases, on account of the frequency with which the painters repeated the established types. The subjects include figures of deities singly or in groups, especially Dionysus and his following; special myths connected with deities, such as the birth of Athena; the labours and adventures of Heracles, and his final apotheosis, all rigidly following the typical schemes; certain episodes connected with the Trojan and Theban cycles; also numerous scenes of combat, often over the body of a fallen warrior, presumably an epic hero, but not definitely named. Of scenes of daily life, the most common are those connected with athletic games and the exercises of the palaestra. Scenes from the life of women are less common, but they are occasionally represented bathing or at the well. Scenes of trade, industry and agricultural operations occur, but only rarely on the black-figure vases.

Black-figure
Style.
Subjects.

360. The Greek potters who practised the black-figure style of painting succeeded in reaching a considerable height of artistic achievement. The story from mythology or the epic poems is told with vivacity and directness. Attention is concentrated on the essential points by a singular economy of all accessories independent of the figures. Thus in the language of the vase painters a single column may stand for a temple, and a tree or a plant may show that the scene is out of doors, while a dolphin or a fish may represent the sea. At the same time much of the drawing is strictly conventional, and a certain amount of grotesqueness is always present, being inseparable from the method employed of black silhouettes. The vases of this class have that interest which always attaches to the productions of a primitive or early art. Owing however to the inherent limitations of the method, which led to its abandonment, the black-figure vases do not reach the highest level. The release of vase painting from its shackles could only be effected by the introduction of another and freer style.

Black-figure
Style. Artistic
capabilities.

361. Towards the close of the sixth century B.C. a complete reversal was effected in the system of vase painting, when the artists seem to have become aware of the advantages of leaving the figures in the ground colour of the vase, standing out upon the dark glaze. The illustration (Fig. 67) shows part of a vase at Palermo by the transitional painter Andocides. By a whim, the artist has painted the two halves of the vase in the two styles. By the new method the grotesqueness, which seems inseparable from the black-figure vases, was eliminated, and the changes of technique made advances in drawing possible. The methods employed in the new style were the following. While the clay was still somewhat soft, the artist made a sketch of his design with a blunt point, lightly marking the clay. The figures are thus sketched out, sometimes

The Red-figure Style.
Methods.



Fig. 67. A part of a vase by Andocides.

after repeated trials, the draped figures being sketched in the nude, and the draperies afterwards added. Next a line of black glaze, about an eighth of an inch wide, is carefully drawn round the outside of the figures for which vacant spaces are thus left. The background is filled up by painting over the interstices which are bordered by the broad lines, but, nearly always, in such a way that the borderline can be distinguished if examined at an oblique angle. The interior details of the figures are next drawn with fine lines of the glaze, and freehand drawing takes the place of the incised lines of the preceding style. For special portions, such as the profiles, a thin black line is often drawn along the boundary of the subject in order to give it better definition and fineness of outline. Occasionally some of the interior details, such as the abdominal muscles, are drawn with the glaze thinned out to a light brown, and are only faintly visible.

In rare cases this lighter glaze is also used as a local wash. To separate a black piece of the figure, such for instance as the hair, from the black ground an incised line is first used; later a space of light ground was left along the margin of the black part of the subject. Accessories which overlap the glaze are sometimes painted in red. Nor did the practical-minded Greek craftsman omit to use such mechanical aids as he found suitable. Circles, such as those that frame the interior of a kylix, are drawn while the vase revolves on the wheel. Straight lines, as for instance for a spear, are drawn with the aid

Mechanical
aids.



Fig. 68. Red-figure Kylix. Subject: Young warrior.

of a flexible ruler. Small circles are struck with a pair of compasses (cf. Fig. 68).

362. The recent excavations on the Acropolis of Athens have proved, contrary to what had previously been supposed, that the red-figure style was fully developed at the time of the Persian war. Countless fragments of pottery were found in the strata of rubbish levelled for the purpose of rebuilding the Acropolis temples, and amongst them were numerous signed fragments by well-known masters of the greatest period of red-figure painting, such as Hieron,

Red-figure
Style. Begin-
nings.

Chachrylion, and perhaps Euphronius. Since the red-figure style had been brought to perfection by the time of the second Persian invasion, it follows that, as some years, perhaps a generation, must be allowed for its development, the introduction of the style cannot have been later than the latter part of the sixth century—say 510 B.C. On the other hand, the excavations that have been made in the tumulus of Marathon yielded numerous black-figure vases, but only one red-figure fragment. We thus obtain definite evidence that about 490 B.C. the black-figure fashion still prevailed for funereal usages although the red-figure vases must have been coming into common use for dedications in the temples of the Acropolis. For a certain time, which cannot at present be accurately defined, the two styles were practised simultaneously, in some cases by the same artists. A small group of painters are known (Nicostrates, Andocides (cf. Fig. 67), Hischylos and Pamphaeus) who painted vases in each of the two styles, and also used both styles on the same vase, either for its inner and outer surfaces, or for different parts of the same surface.

363. The flourishing period of Attic red-figure painting seems to have fallen nearly within the limits of the fifth century B.C. The painters of this century may be divided into the following groups: (1) 'The group of Epictetus,' (2) 'The group of Euphronius,' or the masters of the 'Strong' style, (3) The masters of the later Athenian or 'Fine' style. 1. The group of Epictetus, so called from one of its most prominent artists, consists of certain early red-figure masters. The service they performed was to develop the new technique. Artistically however they continued to work in the spirit of the black-figure school, carrying on its stiff mannerism not refreshed by a renewed study of nature. As a rule their subjects are weak in composition. Where groups are introduced the figures are but slightly related. 2. The group of Euphronius is composed of a series of masters whom we know to have been active about 480 B.C. The activity of Euphronius himself is placed between 500 and 450 B.C. To this group we owe the vases of what is called the 'strong style.' The drawing becomes large and ideal, and the artist obtains complete mastery of the human form (Fig. 69). 3. The later Athenian masters, such as Meidias, working in the 'fine style,' have greater freedom in their treatment of the figure and more elaborate systems of composition. At the same time their themes tend to become more trivial, the mythological subjects are neglected, allegorical names (such as Eunomia) are assigned at random.

364. With the introduction of the red-figure style, the range of subjects represented becomes wider, and instead of repeating the accepted type of a particular incident, such as one of the labours of Heracles, the artists seek to vary their treatment of a subject. Theseus becomes prominent on the vases at the same time that his cult was being developed at Athens. Subjects from daily life become more frequent, and scenes occur from life in the

Red-figure
Style. Vases
of the fifth
century.

Red-figure
Style. Sub-
jects.

palaestra, the banquet-room, the street, the school, and the women's apartments. Towards the close of the period children are also introduced.

365. A frequent addition to Athenian vases whether black- or red-figured is an inscription such as *καλός*, or more fully *ὁ παῖς καλός*, or with a proper name as *Λεύγρος καλός*. In such cases the painter has followed the current Athenian custom,

Names with
καλός.



Fig. 69. Red-figure jar (Stamnos). Subject: Combat of Horseman and Foot-soldier.

by which lovers and admirers thus wrote the names of the objects of their admiration. Aristophanes, *Vesp.* 97, alludes to the custom

καὶ νῆ Δι' ἦν ἴδη γέ που γεγραμμένον
 υἶόν Πυριλάμπου ἐν θύρᾳ Δήμον καλόν,
 ἴων παρέγραψε πλησίον "κῆδος καλός."

Where the name is given, it is doubtful in some cases whether the person named was specially related to the potter, or whether he was of conspicuous station, and well known to the Athenian public. Several attempts have been made on the latter hypothesis to identify the *καλός*-names with those of known persons, and thus to obtain fixed points in the chronology of vase painting, but in most cases such identifications are extremely doubtful. In another direction, the *καλός*-names are important, since they point to a synchronism of the artists who use the same name, and in some cases suggest the author of an unsigned vase. Occasionally, but not often, the inscription is feminine (as *ἡ παῖς καλή*). In certain cases it applies to figures on the vase, probably in a sense equivalent to Bravo! a humorous expression of admiration for the figure.

366. With the decay of the Athenian potteries at the close of the fifth century, the manufacture of the red-figure vases passed to other places, especially to the Greek districts of South Italy. The vases of this period are often very large and highly ornate, but the treatment becomes conventional. The range of subjects is narrower, and such themes as a woman at her toilet accompanied by Erotes (cf. Fig. 70), become more numerous than any others. When mythological and heroic subjects are introduced, the painter makes conscious reference to works of literature, and there is no longer an independent system of traditional types handed down in art. In several cases the designs are directly borrowed from plays of Euripides. There is also a tendency to introduce farcical subjects, and a considerable number of the South Italian vases represent scenes from unknown comedies.

367. At the beginning of this period it is hard to distinguish between vases produced at Athens and at Italian centres under Athenian inspiration. Later the Italian works become more distinct in their technique. There is a growing use of white, which occurs but little on the Athenian vases. Upon the white there is an attempt to show shade and detail with yellowish brown. The palmette and other ornaments under the handle become large and coarse. The red-figure style probably died away in Italy in the third century B.C. About the time that it came to an end an attempt was made to produce a somewhat similar effect by simpler means. There is a class of vases which are covered all over with black glaze and have the figures painted in white upon the glaze. In another class of vases figures are altogether abandoned and the decoration consists of subjects moulded in relief. In some cases copies of coins are thus inserted, while in others we have subjects which are known to recur in silver.

368. Through all the earlier periods of vase painting, side by side with the conventions of the black- and red-figure styles, there had existed schools of painting whose technique consisted in figures drawn in outline upon a light ground, the space

Red-figure
Style. Italian
Schools.

Red-figure
Style. Italian
technique.

The end of
the Red-
figure Style.

White
Athenian
Vases.

within the outlines being more or less filled in with washes of colour. These methods had been practised at Naucratis and Rhodes, and, to a certain extent, at Athens during the time of the black-figure vases. They became important however at Athens at the beginning of the fifth century with the introduction of the red-figure style. We have a series of fine vases, one of which is signed by Euphronius, with figures thus drawn in delicate line upon a white ground. But the most familiar use of this



Fig. 70. Late Red-figure Amphora, Apulian shape. Subject: Toilet scene.

method is upon the numerous class of vases known as the White Athenian Lekythoi. These we know to have been painted for the use of persons making offerings at a tomb. The only reference in Greek literature to the vase painters concerns this group. Aristophanes (*Ecol.* 995) speaks of

τὸν τῶν γραφέων ἄριστον
ὅς τοῖς νεκροῖσι ζωγραφεῖ τὰς ληκύθους.

The subjects are for the most part connected with the tomb. Sometimes the tombstone is shown, and sometimes mythological scenes connected with the tomb, such as a meeting between the deceased and Charon. Sometimes scenes from daily life are represented in a manner corresponding to that of the marble reliefs (cf. Fig. 71). As regards technique the vases are usually of red clay with glazed necks and feet, while the body is covered with a fine coating of white. After a preliminary marking, the subject is



Fig. 71. White Athenian Vases.

drawn in fine lines, at first of black glaze, later of glaze thinned to a golden brown, and finally with dull red lines. The surfaces of the figure and draperies may then be covered with washes of colour usually transient and therefore often lost or difficult to trace. Many of these vases are very beautiful, and all are pervaded by that feeling of placid and gentle melancholy which marks the sepulchral reliefs. Dealing, however, almost exclusively with the tomb and its surroundings, the vases, like the reliefs,

lack variety, and, when they are examined in masses, the treatment of the later vases is felt to be monotonous.

For general accounts see Smith, *Dict. of Antiq.*, 3rd ed., *s.v.* Vas; Baumeister's *Denkmäler*, *s.v.* Vasenkunde; H. B. Walters, *History of Ancient Pottery, Greek, Etruscan and Roman, based on the work of Samuel Birch*. The best introduction to the subject is a study of a catalogued collection, *e.g.* The British Museum, catalogued by C. H. Smith and H. B. Walters; the Ashmolean Museum, *Catalogue of Greek Vases*, by Percy Gardner; the Fitzwilliam Museum, *Catalogue of the Greek Vases*, by E. A. Gardner. General collections of vase paintings:—Gerhard, *Auserlesene griechische Vasenbilder*; Furtwängler and Reichhold, *Griechische Vasenmalerei*; the *Journal of Hellenic Studies* and other archaeological periodicals. Books on special classes: Graef, *Die antiken Vasen von der Akropolis zu Athen*; Klein, *Vasen mit Meister-signaturen*; Klein, *Euphronios*; A. S. Murray and A. H. Smith, *White Athenian Vases in the Brit. Mus.*; Riezler and Hackl, *Weissgrundige Attische Lekythen*. A very convenient re-issue of a large number of vases, published before 1892, is supplied by Reinach's *Répertoire des Vases peints, grecs et étrusques*. Bibliography.

IV. 6. TERRACOTTAS.

369. WORKS in Terracotta or baked clay have been preserved to us from all periods of classical antiquity. For the most part such objects are of small size and were originally of trifling value. While the ease with which clay could be obtained and worked favoured copious production, its fragility and want of value made it unsuited for the permanent and serious work of the sculptor. Clay was widely used by the Greeks for many artistic purposes, in architectural decoration and in sepulchral monuments as well as in the manufacture of terracotta statuettes. Extensive use of clay.

It has been shown above (§§ 286, 295) that the use of clay for sculptured images, albeit of a very rude kind, was well known in primitive times, and besides stiff conventional representations of deities we also find clumsy figures of human beings and animals. The use of the word *πλαστική* for sculpture points to the practice of modelling or moulding (*πλάσσειν*) in wet clay as one of the earliest methods in this art. The earliest clay statuettes found in Greek tombs of the historic period, as in Cyprus, Rhodes, and Boeotia, are of two types, corresponding to the principal types of primitive statues: they are either flat like boards (*σανίδες*) or columnar in form (*κίονες*). They date from about the seventh century B.C.; the limbs are hardly modelled, and they are often decorated with red and black paint, like the contemporary vases. Statuettes, seventh century.

They are followed in the sixth and fifth centuries by statuettes, archaic but showing more development in style, with modelled limbs and drapery, of which two types almost exclusively prevail. These are the *standing and seated female figures*, which again present a close analogy to the contemporary types of Greek statues. Such figures were probably intended to represent deities, especially those of the underworld, Demeter and Persephone; but the same types appear to have been used indiscriminately for votive offerings in temples and for funeral purposes. In the latter case they were originally regarded as embodiments of the souls or ghosts of the departed, as well as representations of the protecting deities of the nether world; a confusion of the

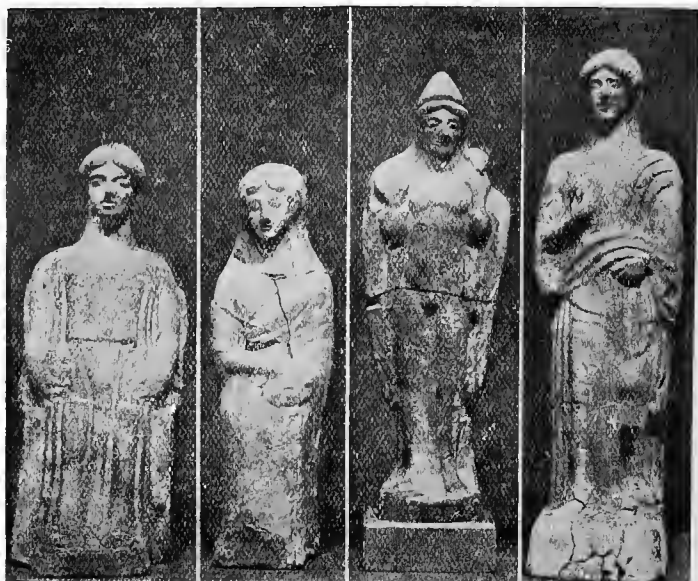


Fig. 72. Greek Statuettes from Rhodes and Sicily (Archaic period).

deity with his worshipper was a common feature of primitive Greek beliefs, and finds frequent reflection in early art. Another favourite type is the funeral mask or bust, usually feminine; a type probably derived from Egypt, where the upper part of the coffin was often modelled in the form of the deceased. The Greeks converted these into busts, hollowing out the back, and adding a veil and the high cylindrical head-dress which typified the underworld deities. Archaic terracottas of another class are obviously only children's playthings, buried in their tombs for their use in a future existence. These comprise dolls with jointed limbs, figures of

horsemen, animals, and even fruit. An epigram in the Greek Anthology tells how Timarete dedicated to Artemis her dolls and other playthings of her childhood. Here the word used for doll is *κόρη*, 'girl' or 'maiden,' a word in general use for the terracotta figures of girls in later Greek times. The contents of the tomb of a girl, dating from the fifth century B.C., recently acquired by the British Museum include a figure of the deceased seated in a high chair or throne, as if deified, surrounded by a pair of shoes or boots, a spinning implement, a bridal vase, and other objects.

It has often been remarked that Greek terracottas do not exhibit, like other branches of art, a continuous and gradual development from archaism to perfection, followed by a similar decadence, but that there is an abrupt break in the fifth century during which this art is almost unrepresented. At the same time the Tanagra figures are sufficient evidence that there was a 'finest period' for Greek terracottas, but as they date from the latter half of the fourth century and the first half of the third, they are widely separated from those of the archaic period which have already been described. In the tombs excavated at Tanagra, terracotta statuettes are commonly found in those of the sixth century, but in those of the fifth they are almost entirely wanting; the fourth-century tombs which yielded so many thousands are dated by means of the plain black-glazed pottery which they contained. This seems to indicate that at Tanagra at least there was a fashion in tomb-furniture, and that in the fifth century, as always at Athens, painted vases had the preference. But in Rhodes and other places where terracottas have been found in large numbers, it is probable that another influence was at work. This was the hieratic tendency so often manifested in Greek art; the terracottas conform to an archaic style for religious reasons. In Rhodes archaic terracottas were often found with fifth-century red-figure vases. On the other hand some sites, such as Athens, and Larnaka in Cyprus, have yielded terracottas of distinctly fifth-century style; but these are exceptional.

370. In order to know the characteristics of the best Greek work in terracotta, we must therefore turn our attention to the Tanagra statuettes of 350—250 B.C. In comparison with those of archaic or hieratic style we are now confronted with a startling change. The seated and standing feminine types are still in a majority, but it is their meaning that has changed. In short they are no longer mythological but *genre* figures; they are no longer suggestive of religious beliefs, but only of secular daily life. The change however must be considered to be due to artistic rather than to religious development; the art-types became secularised, and conceptions originally religious were adopted almost unconsciously for subjects drawn from daily life. Hence we find an almost unlimited variety of feminine standing types. All without exception wear the long tunic or *chiton* and the mantle or *himation* which with the addition of a large shady hat formed the typical dress of the Greek girl or matron. They usually hold a fan, a mirror, or a ball,

Tanagra
figures.

or their hands are simply employed to hold together their draperies; the seated types are similar, but more rare, and are usually placed on a rocky base to add picturesqueness to the composition.

The place which these figures occupy in the history of art certainly corresponds rather to the conceptions of the Hellenistic Age than to those of Praxiteles and his contemporaries. It is not improbable that the true source of their inspiration is to be sought in painting rather than in sculpture; and it may be recalled that during the fourth century there was an influential local school of painters in Boeotia, which chiefly devoted itself to *genre* subjects. In the terracottas of Myrina in Asia Minor, which



Fig. 73. Greek Statuettes from Tanagra (third century B.C.).

in artistic merit stand next to those of Tanagra, Hellenistic characteristics are even more strongly marked. These figures break more completely with tradition, and are hardly earlier than the second century B.C. There is a much greater variety of subject, and figures of Aphrodite and Eros, Dionysos, Victory, and other deities are of frequent occurrence, as are also comic and grotesque subjects. But the influence of Tanagra is also apparent, and in fact the Tanagra types are found repeated, with varying success from an artistic point of view, all over the ancient world. In Asia Minor, in Cyprus, North Africa, and Southern Italy a large proportion of the terracottas found on each site are mere repetitions of the favourite

poses and motives. Generally speaking, the terracottas found in different parts of the Greek world exhibit strongly-marked differences, each having their peculiar local features. In Rhodes and Cyprus, for instance, the terracottas are mainly archaic or hieratic in style; at Myrina in Asia Minor and in the Cyrenaica nearly all date from the Hellenistic Age. Large numbers of votive terracottas were found by Sir Charles Newton at Cnidus and Halicarnassus; at the former, in the precinct of Demeter and Persephone, they were packed in layers in a subterranean chamber, 'assorted like articles in a shop.' They usually represent the goddesses to whom they were dedicated. At Naucratis in the Egyptian Delta and in the Fayûm numerous terracottas have been found which manifest Egyptian influence both in style and subject; these belong mostly to the Ptolemaic period. The terracottas of Sicily show a marked individuality, and a quite independent development, from the richly-coloured votive figures of the archaic period found at Selinus to the Erotic and Bacchic types of the Hellenistic Age, often coloured with a peculiar enamel-glaze of various hues.

371. These statuettes and other small objects in terracotta are, as has been noted, obtained from tombs, or less often from the shrines of divinities. Though in earlier times the original intention may have been to bury them as substitutes for better offerings for the use of the dead or as votive offerings to the gods below, in later times such a purpose must have been almost forgotten. The dainty and playful statuettes which have been found in great numbers in the cemeteries of Tanagra in Boeotia and elsewhere, can only be supposed to have been regarded as part of the accustomed furniture of a grave, without special religious or other significance. Terracottas obtained from shrines are of a votive character, consisting of figures of the divinity or of representations of acceptable offerings. Plato alludes to the practice of hanging up small figures (*κόραι*) in shrines, but other passages in classical authors speak of 'makers of clay figures for the market' or of those who 'make little images of clay for children.' Thus we see that many of these figures can only be regarded as children's toys. Doubtless, too, the figures found in tombs had already served their purpose in this way, or as household ornaments. While the terracottas of the archaic period are mainly votive or religious in character, the later ones show by their illimitable variety of subject, pose, and conception, that no special meaning was intended; and the transformation of hieratic types into mere *genre* creations was brought about partly by the growth of artistic taste, partly by the general rationalising tendency of religious beliefs.

372. The principal methods employed for the production of terracotta figures are as follows.

(1) Figures of horsemen and the like of a rough appearance are produced by rolling and pinching soft clay with the fingers. Such figures are found chiefly in Cyprus, but also occur

Use and
purpose of the
statuettes.

Methods of
production.

elsewhere. They are primitive rather than archaic, since the same methods would at any time produce the same results.

(2) Statuettes and reliefs are worked directly in the soft clay, with the ordinary modelling tools.

(3) Subjects are cast in clay, from clay moulds. Most of the smaller terracottas were made thus, and numerous moulds are extant (Fig. 74). From the original figure, which might be in wax or clay, a mould was prepared, by pressing soft clay upon the front of the figure. This mould was baked,



Fig. 74. Mould for Terracotta figure, from Tarentum.

and could then be used for the production of copies. As a rule only the front is moulded, the back being hastily shaped by hand. In rare cases moulds are also found for the back. The figure thus prepared was painted and fired.

In the manufacture of an ordinary terracotta statuette five distinct processes were usually employed: (*a*) the preparation of the clay; (*b*) moulding and modelling; (*c*) retouching and adding details; (*d*) baking; and (*e*) colouring and gilding. The earlier terracottas are usually produced by one of the two methods described above, *i.e.* by modelling by hand

or with tools; but subsequently the use of a mould became invariable. Although a whole series of figures might be cast from one mould, there were many devices for avoiding monotony, by varying the pose of the head or the position of the arms, or again by different attributes or variety of colouring, all this being achieved in the process of retouching. The colours employed to decorate the figures are usually red and blue, laid on a creamy-white slip, with which the whole figure was coloured. These pigments are usually applied to the drapery, black or deep yellow being employed for hair, features, and other details, and gilding for ornaments.

373. The use of terracotta for architectural or structural purposes also forms a very important branch of the subject. In early times unburnt or sun-dried brick was in general use for building purposes; but burnt brick though universally employed at Rome, was rarely used in Greece, owing to the abundance of marble and good building stone. On the other hand terracotta ornamentation for buildings was in general use down to the end of the sixth century B.C. Except in Sicily and Italy, however, its employment became gradually more restricted, and in the more important buildings its place was taken by marble for tiles and architectural ornaments. Terracotta was generally used for roof-tiles, which were of two kinds—flat and covering-tiles, for cornices and the rows of water-spouts along the eaves, and for the *antefixae* or ornamental terminations of the covering-tiles along the gables and sides of the building. Among the last-named we find many choice examples of decoration in relief at all periods. In the sixth and fifth centuries these terracotta ornaments were usually adorned with bright colours, such as red and blue, and numerous painted specimens have been found at Olympia and elsewhere. In Sicily and Italy it was a common practice to nail slabs of terracotta over the stone-work, and these were either painted or decorated with patterns in relief. The *antefixae* or terminal roof-tiles played a large part in the decoration of temples, and were adorned with all kinds of subjects in relief; they were especially popular in the archaic period. Pausanias mentions early specimens which he saw in Athens, representing Theseus slaying Sciron and Eos carrying off Cephalus. Two similar groups were found in Delos on the site of a fifth-century temple. Terracotta was also largely used for coffins and sarcophagi, of which the most remarkable examples, covered with painted decoration, have been found at Clazomenae in Asia Minor; and for sepulchral urns and large vases made for placing in the tomb.

374. Apart from the architectural terracottas just described, relief-work in this material is comparatively rare; a remarkable exception however is formed by the so-called 'Melian' and 'Locrian' reliefs, and others from the Acropolis of Athens. The Melian reliefs, many of which have been found in Melos and on neighbouring sites, are usually of open-work, cast in a mould and often repeated; they date from the end of the archaic period, about 480 B.C. The subjects are

Terracotta in
architecture.

Reliefs.

usually mythological, such as Perseus slaying Medusa or Bellerophon and the Chimaera (Fig. 75). On the other hand the reliefs found at Athens and Locri (in Southern Italy) are votive in character, with figures of the deities to whom they were dedicated or other appropriate subjects; they are in the form of rectangular plaques, intended for hanging against a wall.



Fig. 75. Archaic relief from Rhodes (about 480 B.C.).

Pottier, *Les Statuettes de Terre cuite dans l'Antiquité*, Paris (Hachette),
 Bibliography. 1890. C. A. Hutton, *Greek Terracotta Statuettes*, London (Seeley),
 1899. *Brit. Mus. Catalogue of Terracottas* (1903). R. Kekulé,
Die antiken Terrakotten, 1880, etc. (Stuttgart). Vol. III. *Typen der griechischen
 Terrakotten*, by F. Winter (1903). Walters, *Art of the Greeks* (1906), chap. X.

IV. 7. GREEK BRONZE-WORK.

375. Although to a great extent partaking of the nature of sculpture and bound up with its history, Greek bronze-work is sufficiently important for separate treatment. Not a few of the great sculptors, notably Lysippus, worked exclusively or mainly in bronze, and there are a few existing masterpieces, such as the Charioteer at Delphi (Fig. 39), in that material. But nearly all the great statues in bronze have perished, or are only represented by heads and other fragmentary remains. On the other hand there are extant innumerable specimens of decorative art in bronze, and there was no material on which the Greeks lavished so much skill and attention. It is difficult at the present day to realise the extensive use of bronze in antiquity, even after the introduction of iron. The ancients always employed bronze for locks and keys, knives and other tools, and for defensive armour and weapons, where we now use iron or steel. It was also largely used for furniture, such as chairs or couches, for mirrors and toilet articles, and for vessels of all kinds where we should employ wood, glass, clay, and other materials. Bronze moreover is a material which easily lends itself to decoration, by means of modelling, chasing and engraving, and thus gave ample play to the marvellous decorative instincts of the Greeks. Many of the bronze objects in our museums take high rank as works of art; and we have besides an enormous number of bronze statuettes, used for adorning domestic shrines or for attachment by way of ornament to articles of furniture, which are often of great merit, or of interest as copies from masterpieces, though hardly of sufficient importance to call for notice in a history of Greek sculpture. Greek bronze-work may be considered under two heads, for each of which distinct technical processes were required: (1) Statuary, produced either by solid casting, by riveting together beaten plates, or by the hollow-casting process known as *cire perdue*. The two former processes are practically confined to the earliest periods, and hollow-casting is almost universal from the sixth century onwards. (2) Decorative work, ornamented with chased, engraved, or *repoussé* designs.

Extensive use
of bronze.

Different
processes.

All the earliest bronze statuettes are cast solid, and for smaller objects this process was always retained, but the waste of valuable material and inconvenient weight of larger figures soon brought about the introduction of hollow-casting from Egypt. The alternative early process of riveting beaten plates together (*σφυρήλατον*) was often applied to the *ξόανα* or primitive cult-statues when it was desired to cover them with a representation of drapery. It was also largely used for decorative work, ornamentation and figures in relief being produced by beating up from behind with a blunt instrument, and the details being engraved with a sharp point in front. Of this kind of work the best examples are a series

of early reliefs from Olympia, the Acropolis of Athens, and other sites. They date from the seventh century B.C., and are variously attributed to a Corinthian or Argive, and to a Chalcidian school. Chalcis in Euboea was the only town in Greece possessing copper-mines of importance, and was a great commercial centre in the seventh and sixth centuries B.C., but so far no remains of early art have been found here.

The attribution of the invention (or rather introduction) of hollow-casting to Rhoecus and Theodorus of Samos about 600 B.C. may be not without a germ of truth. They probably learned the art in Egypt and introduced it into the Peloponnesus. They were probably also the first to utilise clay figures as material for bronze statues. Pausanias mentions a



Fig. 76. Bronze foundry, from a vase-painting at Berlin.

statue of Night by Rhoecus at Ephesus as the earliest hollow-cast statue. The *cire perdue* method which henceforward became customary was in the main identical with that in use at the present day. The name refers to the manner in which a wax model was disposed of and replaced by molten bronze; its essential features were the clay or plaster model roughly reproducing the whole conception with which the sculptor began to work, and the thin coating of wax laid over it in which all the details were accurately executed. Over this an outer mould of clay was employed, and the wax being melted in a furnace ran out through holes, the molten bronze being introduced in its place. Finally the surface of the bronze was prepared by touching up or by such adornments as colouring,

lacquering, or gilding. A vase-painting in the Berlin Museum (Fig. 76), dating about 500 B.C., represents a bronze foundry with statues in process of completion; it shows that the casting was often done in several pieces, the parts being afterwards welded together.

376. Existing Greek bronze statuettes of the archaic period are mostly of small size, and reproduce the types familiar from the larger works of the period, such as standing male or draped female figures. Of the fully-developed style of the fifth century there are comparatively few examples in bronze, though the art of Pheidias and Polykleitus is reflected in some statuettes of later date. When we reach

Extant works.



Fig. 77. Bronze relief from the river Siris.

the fourth century the reproductions of famous sculptures become more numerous, and this period seems to have been the golden age of the art in Greece, not only for the statuettes, but also for decorative bronze-work. Among the most remarkable bronze works of this period are two in the British Museum, the colossal head of Aphrodite from the Castellani collection which reflects the spirit of Scopas, and the lovely head of Hypnos in which Praxitelean qualities are most apparent. The great worker in bronze of this century was the sculptor Lysippus, and there are many existing bronzes which belong to his school, notably the

exquisite heroic figure from the Lake of Bracciano in the British Museum, in some respects the finest bronze in existence. It is cast solid with a flat back, having been attached to a piece of furniture, and therefore belongs rather to the category of reliefs than to that of figures in the round. Equally reminiscent of the style of Lysippus are the famous Siris bronzes, from the shoulder-pieces of a cuirass, which from a technical point of view are a truly marvellous piece of work (Fig. 77). The figures are beaten out from behind in *repoussé* work, and are hammered out to such a degree of fineness that they are almost in the round, and the bronze is hardly thicker than paper. The details are worked with extraordinary care and delicacy. The influence of Lysippus is also apparent in another group of bronzes in the British Museum, found at Paramythia near Dodona; they represent various deities, and date from the third century B.C.

The tendency of the Greeks to lavish decoration on ordinary articles of household use is nowhere better exemplified than in their mirrors and mirror-cases, which were invariably of bronze. The archaic form of the Greek mirror was that of a circular polished disc, often with a handle sculptured in the form of a figure, such as Aphrodite. The back of the disc was sometimes engraved with a group of figures, but the Greeks for some reason did not favour this method of decoration, and it was left for the Etruscans to bring it to perfection. Many of these archaic mirrors have been found on the Acropolis at Athens and elsewhere in Greece; but they were supplanted about the end of the fifth century B.C. by plain circular discs without handles, enclosed in flat boxes or cases with hinged covers. The outside of the cover was usually adorned with a relief (*ἔμβλημα*) attached separately. Many of these designs, which cover the period 400—200 B.C., are exceedingly beautiful, the *repoussé* work being often most elaborate. The subjects are very varied, many being mythological or from heroic legend. One of the most beautiful, representing Aphrodite and Anchises, was found with the Paramythia bronzes mentioned above; among the engraved designs which are occasionally found on the backs of the mirrors themselves, the finest is a group of personifications of the city of Corinth and the island of Leucas. Another in the British Museum represents Pan and Aphrodite playing with knucklebones (Fig. 78); the drawing is very fine and the conception is of great beauty. But the style of the reliefs is by no means uniform, some being of very inferior workmanship.

Although engraving on bronze was never so popular in Greece as in Etruria, and seems to have gone out of fashion entirely by the end of the fifth century, there are yet sufficient examples of fine work in this style to call for mention. Its history can be traced from the Geometrical period (eighth century B.C.) when large brooches (*fibulae*) were made in Boeotia, to the bow or foot of which large flat pieces of metal were attached, engraved with elaborate designs, of animals, ships, etc. One in the British Museum actually has a mythological subject, the slaying of the hydra by Heracles. The style is however rude and conventional. As a specimen

of sixth-century work we have a bronze cuirass found at Olympia, engraved with the subject of a lyre-player and chorus, Sphinxes, and various animals. The style is somewhat affected, and recalls that of some black-figured vases of the period. The transition from the archaic to the 'fine' period is well illustrated by two bronze discs, one in the British Museum, the other at Berlin, dating about 500—480 B.C. In both cases the subjects engraved are single figures of athletes engaged in the contests of the *πένταθλον*; the style corresponds to that of the earlier red-figured vases and may be a reflection of the work of the sculptor Myron. Of the later instances of Greek engraving in bronze the best are those on the mirrors already



Fig. 78. Greek mirror with engraved design.

described. Allusion has also been already made to some of the most noteworthy examples of Greek bronze-work in *repoussé* relief, both of the archaic and of the fine period. The archaic period is best represented by the reliefs from Olympia and Athens, the later by the mirror-cases. An interesting specimen of the transitional period of 500—480 B.C. is a curious little figure of Athena found on the Acropolis at Athens, which is formed of two reliefs placed back to back, so as to show both sides of the figure. The style though archaic is full of grace, and may be compared with that of the female figures in marble found on the same site.

Bibliography.—*Brit. Mus. Catalogue of Bronzes* (1899). Murray, *Greek Bronzes*, London (Seeley), 1898. See also *Bibliography of Sculpture*, p. 322.

IV. 8. GOLD AND SILVER WORK.

377. GREEK ornamental work in metal includes work in gold or silver as well as in bronze, and the former may be considered under two heads: Jewellery or personal ornaments of all kinds, such as finger-rings, earrings, necklaces, or pendants; and Chasing, which includes vessels of gold and silver or ornaments of furniture, etc. Ornamental work in the precious metals appears at a very early stage, as has been noted above (§§ 285 ff.), and that at quite an advanced stage of technical development. In the later products may be traced the whole development of Greek art down to

Roman times. The ordinary Greek term for gold and silver *τορευτική* work was *τορευτική*, though in strict accuracy this word denotes chasing, as opposed to *ἐμπαιστική* or work in *repoussé*. It may however be employed as a general term for all processes of stamping, chiselling, or engraving, which could be applied to metal, with the exception of casting and moulding, which belong to the art of *πλαστική* or sculpture, and *γλυπτική* or engraving of gems and coin-dies.

During the period of the dawn of Greek history there is a gap of several centuries after the decadence of Mycenaean art, during which the jeweller's art is at a very low ebb, and specimens of metal-work hardly exist; although the contemporary series of 'island-gems' shows that the gem-engraver's hand had not lost its cunning. We are forced to turn for the metal-work of this period to literary records, such as they are, and to seek in the descriptions of the shields of Achilles and Heracles the achievements of the goldsmiths and silversmiths of this age. The less mythical chest of Cypselus, in which the decoration was largely plated with gold, is also instructive for our purpose. The method of decoration, if not the technique, of the Homeric shield may be reflected in a series of bronze and silver bowls found in Cyprus and Italy, which belong to the eighth and seventh centuries B.C. (Fig. 79). They are unquestionably of Phoenician workmanship, richly ornamented with engraved designs of hunting-scenes, pastoral scenes, and decorative patterns; but they must be regarded rather as influencing Greek art than as actually illustrating its development. Some gold plaques found at Cameirus in Rhodes, now in the British Museum, which date from the seventh century B.C., have quasi-Oriental *repoussé* designs of the Asiatic Artemis, Centaurs, and similar subjects.

The metal-work of the archaic period is really better illustrated by the products of Etruscan art; the processes employed by these people were largely identical with the Greek, and their achievements hardly inferior in style or technical merit, while gold ornaments have been found in the richest profusion in Etruscan

Etruscan
work.

tombs of the sixth and fifth centuries. Towards the end of the seventh century B.C. a great wave of Oriental and Greek influence swept into the country, and in this we may possibly find a verification of the tradition that when Demaratus was expelled from Corinth in 665 B.C. he took with him a body of craftsmen who introduced various arts into Italy. Traces both of Greek and Oriental influence are to be found in the contents of the Polledrara tomb at Vulci, which included a bronze bust with reliefs of Greek style round the pedestal, and a richly-embossed gold diadem. The contemporary Regulini-Galassi tomb at Cervetri was very rich in gold



Fig. 79. Phoenician metal bowl.

ornaments. Silver is always much rarer, but the series of reliefs found at Perugia form a notable exception. In point of style these may be compared with the Ionic Greek vases of the sixth century; and it is probable that much of what has hitherto passed for Etruscan metal-work must have been actually imported from Greece, and especially from Ionia. The art of the Etruscan goldsmith manifests itself in various forms; in necklaces, brooches, earrings, and diadems, often richly ornamented with filigree or granulated work; but these soon degenerate into pretentious vulgarity or hasty fragile work only produced for funeral purposes.

It is therefore to Etruria that we must chiefly look for information as to the achievements of Greek workers in metal down to the fifth century. Even when the technique is of purely native origin the Etruscan jewellery of this period is largely inspired by Greek feeling and Greek ideas. This rarity of early Greek jewellery in Greece is the more remarkable, because although Greek taste would at all times have avoided any tendency to vulgar display of ornament, yet statues, vase-paintings, and other works of art give evidence that jewellery and ornaments were worn by Greek women throughout the period. We know from the description of Pausanias that the statue of Athena Parthenos was adorned with much jewellery. Otherwise the goldsmith's art can only be illustrated by a few finger-rings or pairs of earrings, or by the quasi-Oriental objects found in profusion in the tombs of Greek cities in Cyprus, such as Amathus, Curium, and Marion.

378. In the fourth century B.C. the goldsmith's art in Greece reached a pitch of magnificence and beauty, combined with delicacy and fertility of invention, which has never been surpassed. In no class of ornaments is it better illustrated than in the wonderful treasures obtained in the excavations of the

Greece.
Fourth
century.

Russian government in the Crimea and along the northern coast of the Black Sea. The chief finds have been made at Kertch, the ancient Panticapaeum, a remote outpost of Hellenic civilization in the Cimmerian Bosphorus; it was a colony of Miletus, and had close commercial relations with Athens in the fourth century. A tomb explored in 1831 at Koul-Oba contained a rich array of gold ornaments, silver vessels and other furniture. A woman's skeleton was adorned with a diadem of electrum embossed with monsters and floral patterns, and on her breast were two large gold medallions representing the head of Athena Parthenos, evidently copied from the famous chryselephantine statue by Pheidias (Fig. 80). Her companion, a male, wore a gold tiara, a torque ornamented with figures of Scythian horsemen, and bracelets, and his armour was plated with gold. From the sumptuous contents of this tomb it has been supposed to contain the remains of a local ruler and his queen. In 1862 the tomb of a Scythian ruler was excavated at Nicopolis; it contained a silver-gilt amphora (Fig. 81) which has been described as the finest extant specimen of Greek *repoussé* work in this material. The body is ornamented with birds and floral patterns and on the shoulder is a frieze of Scythians grooming or breaking in horses. The composition is extremely spirited and life-like. Besides this the tomb contained many gold ornaments, including gold-plated scabbards and bow-cases with reliefs. In 1864 the remains of a priestess were found at Bliznitza, her ornaments forming a treasure of richness and beauty beyond description. They include frontlets, necklaces, bracelets, and a huge pair of earrings or rather pendants hung over the ears, the last-named ornamented with medallions representing nymphs with the armour of Achilles.

The contents of these tombs may be dated about 350—320 B.C., and the series of ornaments has generally been regarded as forming the finest extant specimens of ancient jewellery. The gold is wrought with exquisite



Fig. 80. Gold ornaments from the Crimea.

delicacy and mastery of modelling. It is an open question whether they are of local workmanship or importations from Athens; but it is probable



Fig. 81. Silver chased vase from the Crimea.

that in the fourth century many Athenian artists migrated to the Crimea, where they found a favourable opening for carrying on their trade among an opulent and friendly people.

Fine gold-work of the fourth century is not however confined to these regions. The British Museum possesses very beautiful specimens of necklaces and earrings from Melos and other sites round the Aegean Sea, in which the principle of decoration is a combination of elaborate chain-work with pendants modelled in the form of Cupids, Sirens, or Victories, or of simpler forms. Some of the finger-rings of the period are also engraved on the bezel (which is plain without any stone setting) with designs of great merit. In all this Greek gold-work of the finest period the guiding principle is to regard the workmanship as of more importance than the

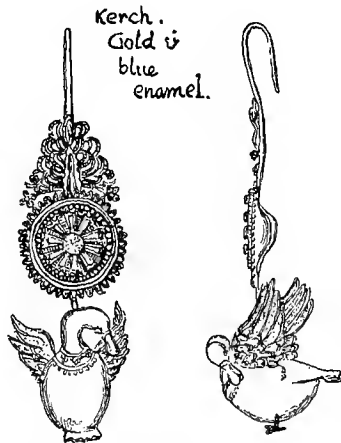


Fig. 82. Greek earrings from Kertch.

material, as is also the case with engraved gems. In the succeeding century the delicacy of workmanship preserves almost the same high level, but simplicity of taste gives way to over-elaboration.

379. Greek work in chased silver is comparatively rare, at least in comparison with that of the Roman period; but the fact appears to be that it was little used for works of art before the Hellenistic Age. That was the time when painted vases began to go out of favour, and with the increase of wealth and luxury vases of metal came into general use for domestic and decorative purposes. Thus a new industry arose, and in Asia Minor there sprang up an important school of *caelatores* or silver-chasers, of whom Pliny gives some

Chased silver-work.

account. The first place he assigns to Mentor, a silver-worker of about 350 B.C., who made two cups for which the orator Crassus paid four hundred pounds. Other famous names were Acragas, Boethus, and Mys, who made cups decorated with mythological subjects, which were preserved at Rhodes. There were also famous cups with scenes from heroic legend, made by Zopyrus and Pytheas. After the conquest of Asia in 189 B.C. Lucius Scipio carried off gold and silver-chased vases of the respective weight of fifteen hundred and fourteen hundred pounds.

Besides chased vases there are some good extant examples of statuettes in silver, among which may be mentioned a group of a boy and goose in the British Museum, dated by coins found with it, about 240 B.C. Its interest lies in its being a reproduction of the well-known *genre* types associated with the sculptor Boethus of Carthage. Greek silver vases are distinguished by the simple refinement of their form and the delicate chasing of the ornaments. The Romans were great collectors of such objects, and closely imitated them. Hence in the vases of the famous Bosco Reale and Hildesheim treasures (at Paris and Berlin respectively) we see the spirit of the Hellenistic Age reflected as faithfully as in the Pompeian wall-paintings.

Three methods of decoration are employed in the silver vases with reliefs. Either the figures are in *repoussé*, which is the general rule, or they were chiselled out like sculptured reliefs; sometimes these two methods are combined. Or thirdly, they were made separately and soldered on, like the Siris bronzes, in which case they were known as *ἐμβλήματα* (*crustae*). The great silver vase from the Crimea described above is an example of the chasing process, except for the heads of animals which were made separately in *repoussé*.

Brit. Mus. Catalogue of Jewellery (1911). E. H. Minns, *Scythians and Greeks*, Cambridge, 1913. E. Fontenay, *Les Bijoux Anciens et Modernes*, Paris (1887). Daremberg and Saglio, *Dict. des Antiqs.*, s.v. Caelatura. Walters, *Art of the Greeks* (1906), chap. XIII.

IV. 9. ENGRAVED GEMS.

380. ALL races ascribe magical powers to crystals and other stones of striking form or colour, and employ them as potent amulets. In fact all jewellery has its origin in magic rather than in aesthetic. The Babylonians used stones in the form of cylinders, at first plain, but afterwards inscribed with a sacred subject to augment the virtue inherent in the stone (Fig. 83). The cylinder was the earliest form in Egypt also, but

it was soon superseded by stones cut in the form of sacred beetles. Finally such engraved amulets were found convenient for stamping clay

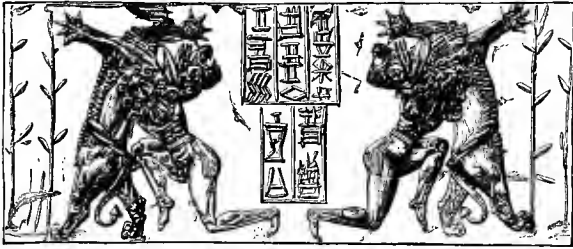


Fig. 83. Impression from an early Babylonian cylinder ; with the name of the owner and his deity, between two representations (reversed) of the same subject : *real size.*

or wax. There is no mention of engraved gems in Homer, although there are many passages in which we might expect to find the signet used, if it had been employed, as in the letter of Mycenaean
Gems. Proetus, and in the opening and closing of treasure-chambers and coffers, which in classical times would certainly have been secured with seals. On the other hand engraved gems, usually bean-shaped or glandular and pierced for suspension, are characteristic of the tombs of the Mycenaean (Bronze) Age. From the frequency of their occurrence on the Greek islands they are commonly termed 'Island-gems.' As might naturally be expected, these early gems are usually of soft materials, such as steatite and slate, but the engraver had mastered hard stones, such as hematite, green jasper, and even rock crystal. The designs are almost invariably naturalistic, lions, stags, bulls, cows and hinds suckling their young, cuttle fish, dolphins, and the like. A gem from Mycenae bears a design very like the bull fresco from Tiryns, another shows a man leaping on to the back of a bull. The most characteristic Mycenaean motive is that of two animals ranged like heraldic supporters (Fig. 84). One such from Mycenae



Fig. 84. Example of a lenticular gem of heraldic type, in rock crystal: *real size.*

(Lower Town) repeats the design of the Lion-gate; another bears two griffons on either side of a column. This principle survived in the types of certain archaic coins, *e.g.* two calves with a tree between them (Mytilene), two boars facing (Methymna), two rams' heads facing (Delphi), two goats' heads (Delphi). These gems were suspended from the neck or wrists, and were probably primarily worn as amulets; for which purpose they are still used in Melos and Crete.

381. The lenticular and glandular gems were gradually superseded by those shaped like scarabs (Figs. 85, 86), or scaraboids, pierced for suspension. It is on these that there appear the best productions of the Greek engraver (Fig. 87). Naturalistic designs characterize the earlier gems, whilst in the fifth century B.C. appear heroic subjects corresponding in design and treatment to the sculpture of

Later
development.



Fig. 85. Greek scarab of the sixth century B.C. of the finest archaic style: *one and a half times the real size.*



Fig. 86. Gem of the fifth century B.C.: *one and a half times the real size.*



Fig. 87. Greek scarab-gem of the best period of Art: *one and a half times the real size.*

the same period, *e.g.* a gem with a nude warrior in a Corinthian helmet, fitting on a greave. The low-relief characteristic of the bas-reliefs is also a feature of the gems of the same period. Portraiture on gems first appears in the same century; a gem signed by Dexamenus bears a portrait head. It is also probable that in certain gems which bear designs corresponding to well-known Attic funeral stelae, we have instances of portraiture rather than of idealism; thus there is a gem signed by Dexamenus bearing an

Athenian lady seated on a chair, an attendant in front offers her mistress a wreath and a mirror; another shows a youth caressing his dog.

But it is from the time of Alexander that on gems, as on coins, portraiture becomes fully developed (Fig. 88). By far the greater number of extant



Fig. 88. Fine portrait gem of the third century B.C.: real size.

gems belong to the Hellenistic period. Their subjects are of the most varied description—divinities, portraits of famous personages, quadrupeds, birds, and insects. In Theophrastus' time the stones used for signets were *σμάραγδος* (emerald, beryl, and aqua marina), *ἀνθραξ* (carbuncle = garnet), *κρύσταλλος* (rock crystal), *ἀμέθυσσον* (amethyst, purple rock crystal). These four are crystalline, the rest are amorphous: *ἡαλοειδές* (chalcedony), *σάρδιον* (sard), *λυγγούριον* (yellow carnelian), *δνύχιον* (onyx), *ἀγάτης* (agate), *ἰασπίς* (green jasper), *ὄμφαξ* (chrysoprase), *σάπφειρος* (lapis lazuli). The vast majority of extant gems are of sard. The device was often adapted to the particular stone, e.g. Dionysus was cut on the amethyst, which was supposed to ensure its wearer against the effects of wine.

382. The names of only two engravers have reached us from the sixth century B.C., Theodorus and Mnesarchus, both Engravers. Samians; the former, who was also a famous sculptor, engraved the signet of Polycrates: the latter was the father of Pythagoras. To the succeeding century probably belongs Dexamenus of Chios, known only from four splendid works signed with his name, two of which have already been mentioned: two others bear cranes, one flying the other standing. Pyrgoteles engraved portraits of Alexander, whilst later came Pasiteles, Cronius, and Dioscorides, who engraved the head of Augustus, which the latter used as his signet to the close of his life, and which was used by his successors (except Galba) down to Pliny's time. To the Ptolemaic period belong Satyreius, who engraved on crystal a head of Arsinoe (*Anth.* ix. 776), and Tryphon, who cut in aquamarine a swimming figure of Galene (*Anth.* ix. 44).

C. W. King, *Antique Gems* (1866), *Antique Rings and Gems* (1872), *The Gnostics and their Remains* (1887); J. H. Middleton, *The Engraved Gems of Classical Times* (1891); The British Museum Bibliography. *Catalogue of Engraved Gems* (1888); W. Ridgeway, *The Early Age of Greece*.

IV. 10. MUSIC.

383. IN the following brief account of the art of music as practised by the ancient Greeks all that can be attempted is a general outline bringing into prominence the chief points of difference between Greek music and our own. One striking initial difference is the importance the Greeks assigned to music as a means of education. Thus Plato frames stringent regulations concerning the musical education of youth; and Aristotle, though differing from him in detail, entirely agrees in principle. But although music was thus recognised as necessary to a liberal education, yet with the Greeks it was more closely fettered to poetry than now. The staple of the Greek art was vocal composition with instrumental accompaniment: there is no trace of any such independent development of instrumental composition as we possess in our concerted chamber and orchestral music. Greek music was developed from the hymn addressed to a deity by a priest or a band of worshippers: the instruments, at first a mere adjunct, ultimately indeed attained a separate artistic existence, but never rivalled in importance the human voice.

384. The earliest Greek students of acoustics of whom we read were Pythagoras and his followers, who by ascertaining the mathematical ratios of various intervals found a basis for the construction of a scientific scale. But Greek musicians already had their scale, whether scientific or not; and there is no evidence that Pythagorean research influenced the practice of musicians. A diatonic scale derived from the natural harmonics has three intervals: a greater tone of $\frac{8}{9}$, a lesser tone of $\frac{9}{10}$, and a semitone of $\frac{15}{16}$. Plato however gives a scale consisting of two intervals only, a tone of $\frac{8}{9}$ and a semitone of $\frac{245}{256}$; but whether either scale was in actual use does not appear. Aristoxenus, some half-century later, divides the octave into 12 equal semitones, as in our own system of 'equal temperament'; and we may perhaps assume that this represents the practice of musicians at least about the end of the fourth century.

385. The smallest interval recognised by the Greeks as a true consonance was the fourth: the tetrachord thus is the basis of the scale. We start then with the four notes E F G A; the intervals being semitone, tone, tone. This is extended by superimposing a second tetrachord, which may be done in two ways: either by making the highest note of the first tetrachord the lowest of the second, or by starting the second independently on the fifth above the lowest note. In the former case the second tetrachord was said to be 'conjunct' (*συνημμένον*), and we get a heptachord E F G A B \flat C D. In the latter the tetrachord is 'disjunct' (*διεζευγμένον*), and we have an octachord E F G A B C D E: the *διάζευξις* being the interval A : B. That the hepta-

chord was the older system may be gathered from the names given to the notes, viz. :

Heptachord	E	F	G	A	B \flat	C	D.	Octachord	E	F	G	A	B	C	D	E.
		ὑπάτη	παρυπάτη	λιχανός	μέση	(τρίτη	) παρανήτη		ὑπάτη	παρυπάτη	λιχανός	μέση	(παραμέση	) τρίτη	) παρανήτη	νήτη
						συνημμένων							διεξευγμένων			

The name μέση is strictly appropriate to the central note of the heptachord only, and appears as a survival in the octachord. Now it is generally agreed that μέση was what we call the tonic of the system¹. The Greeks thus regarded the tonic as the central note of the series, not, as we do, the beginning of it. It should be observed too that ὑπάτη denotes not the highest but the lowest note. Next the heptachord and octachord are developed into a hendecachord and dodecachord by adding another tetrachord below :

A	B	C	D	E	F	G	A	B \flat	C	D	A	B	C	D	E	F	G	A	B	C	D	E	
προσλαμβανόμενος											προσλαμβανόμενος												
	ὑπάτη	παρυπάτη	λιχανός	ὑπάτη	παρυπάτη	λιχανός	μέση	(τρίτη	) παρανήτη	νήτη		ὑπάτη	παρυπάτη	λιχανός	ὑπάτη	παρυπάτη	λιχανός	μέση	(παραμέση	) τρίτη	) παρανήτη	νήτη
	ὑπάτων			μέσων			συνημμένων					ὑπάτων			μέσων			διεξευγμένων					

We thus get two sets of ὑπάτη παρυπάτη λιχανός which are distinguished by the specification ὑπάτων and μέσων respectively: the lowest note is the 'added' note προσλαμβανόμενος, which gives the lower octave of the tonic. The hendecachord has B \flat in the lowest tetrachord and B \flat in the highest. The dodecachord was further extended to two octaves by adding three notes above: these notes F G A were called τρίτη, παρανήτη, and νήτη, ὑπερβολαίων. Here then is the complete scale :



¹ See however Mr C. Abdy Williams in the *Classical Review*, vol. XII. p. 98.

This system does not represent the extreme range of Greek music. The acutest notes of the higher instruments and of boys' voices were far further removed from the lowest register of men's voices and of bass instruments; but probably no melody exceeded the compass of two octaves.

386. The Greek composer used a number of *ἄρμονίαι* or scales. The nature of these *ἄρμονίαι* is the battlefield of modern expositors; some maintaining that they differed in the position occupied in the scale by the semitones, others that the difference was of pitch only. It is impossible here to enter into the arguments: in this article Westphal's view is adopted, that the difference was in the position of the semitones, that the *ἄρμονίαι* were really *modes*, differing as much as our major and minor. For a lucid statement of the other side the reader is recommended to Mr D. B. Monro's *Modes of Ancient Greek Music*. It is affirmed by Plato, and on all hands admitted, that the original Greek mode was the Dorian, *δωριστί*. But besides this we have *φρυγιστί*, *λυδιστί*, *μιξολυδιστί*, *λοκριστί*, and others. The Dorian mode has for its octave E F G A B C D E, the *μέση* or tonic being A. It is identical with one form of our minor mode, in which the minor seventh occurs instead of the leading note. The octave is from E to E, not A to A, because according to rule the melody must end on the fifth. The *μέση* of *δωριστί* is the *μέση* of the diatonic double octave given above. *Λοκριστί* is another minor mode, but has for its *μέση* D, the *παρανήτη διεξευγμένων* of the above scale; so its octave is A B C D E F G A. It differs then from the Dorian in having one of its semitone intervals between 6th and 7th instead of 5th and 6th, and from our minor in having a major 6th and minor 7th. *Φρυγιστί* is a major scale with G for its *μέση*; the octave is D E F G A B C D. It differs from our major in the absence of a leading note. *Λυδιστί* is a major scale with *μέση* F, and octave C D E F G A B C, differing from our major in having B instead of B♭. *Μιξολυδιστί* is perhaps a minor scale with *μέση* E and octave B C D E F G A B, differing from our minor in its minor second and seventh. In all the above scales the melody ends on the fifth, which the Greeks must have regarded as the most natural ending, since the modes ending on the tonic seem to be derivative from the former. These are *ὑποδωριστί* (*αιολιστί*), *ὑποφρυγιστί*, *ὑπολυδιστί*. There were also, according to Westphal, modes in which the melody ended on the third, such as *σύντονος ἰαστί* (a form of *φρυγιστί*) and *συντονολυδιστί*. This view, which is strongly controverted by C. von Jan, must be regarded as doubtful.

387. Besides the *modes* aforesaid there were *keys*, as they would now be called. These were once five in number: *τόνος Δῶριος* (B♭ minor), *ὑποδῶριος* (A minor), *φρύγιος* (C), *λύδιος* (D) and *μιξολύδιος* (E♭ minor). By the time of Aristoxenus F minor and G minor were added. Aristoxenus increased the number to 13, by adding the keys with sharps in the signature, E minor to G♯ minor, and F minor in the higher octave. Other higher octaves were subsequently added; but of these additions only E minor and B minor seem to have

come into practical use; while for vocal music only the old seven were used.

388. So far we have dealt only with the simple diatonic scale, *διάτονον σύντονον*, in which no intervals occur that are not familiar in modern music. But in Greek music the diatonic scale was frequently altered by introducing intervals unknown to ours. Taking the Dorian octave as an example we find the scale appearing in the following forms:

1. *ἐναρμόνιον*. In this scale a note is interpolated between E and F equidistant between them, forming intervals of one quarter-tone from E to E', and another from E' to F. Whenever this is done, the next note G is omitted. The same happens in the higher tetrachord between B and C, and D is omitted: the scale then runs as follows E E' F A B B' C E; where E' and B' denote sounds higher than E and B by a quarter-tone or *δέσσεις*, the smallest interval found in Greek music.

2. *διάτονον μαλακόν*. Here we have after F a note higher than F# by a quarter-tone: E F F# A, and again B C C# E. Thus we get $\frac{3}{4}$ tone from F to F# and $\frac{5}{4}$ from F# to A. Again G and D are omitted.

3. *χρῶμα ἡμιόλιον*. Here the new interval is $\frac{3}{2}$ diesis = $\frac{3}{8}$ tone. E E'' F' A, where the double dash denotes that the note is raised $\frac{3}{8}$ tone. Here we have two successive intervals of $\frac{3}{2}$ diesis and then 7 *δέσσεις*.

4. *χρῶμα μαλακόν*. The new interval is $\frac{4}{3}$ diesis = $\frac{1}{3}$ tone, and the tetrachord runs E E'' F' A, where '' denotes that the note is sharpened by $\frac{4}{3}$ diesis, ' by $\frac{2}{3}$ diesis: there are two successive intervals of $\frac{4}{3}$ diesis and then 7 $\frac{1}{2}$ *δέσσεις*.

5. *χρῶμα σύντονον* or *τονιαῖον*. This had no interval foreign to our scale but merely inserted F# and omitted G. In each scale the series of small intervals was called *πυκνόν*, e.g. E E' F. The *πυκνόν* might be introduced in one or both tetrachords: also two sorts might be combined: e.g. the *χρῶμα σύντονον* might borrow its *παρυπάτη* from the *χρῶμα μαλακόν*, etc.

389. Alypius has preserved the Greek symbols denoting musical sounds; and they are exemplified in the fragmentary hymns to Apollo recently discovered at Delphi. From the end of the fourth century the Ionian alphabet current at Athens was used for the notes in vocal music, while a more archaic alphabet represented instrumental notes. The characters were written in different positions to represent such modifications in pitch as we denote by sharps and flats.

390. It was formerly maintained that all Greek music was performed either in unison or in octaves. And so far as concerns the voices this is indisputable. But there is clear evidence that other parts were added by the instruments, which accompanied the voices with a kind of simple counterpoint: also that the instruments themselves took more than one part. Two-part composition is said to be as old as Terpander: to Lasus is attributed the introduction of polyphonic writing. Aristotle states that the melody was always below the accompaniment.

Notation.

Part-writing.

391. The Greeks used both wind and stringed instruments. The Homeric names for stringed instruments are *φόρμιγξ* and *κίθαρις*; later we find *λύρα* and *κιθάρα*. Apparently there was no essential difference between these instruments, though the *κιθάρα* seems to have had a larger sounding piece and a somewhat fuller tone: but no stringed instrument sustained the tone as our violin does. They were mostly played with a plectrum, though sometimes, it would seem, with the fingers also. The number of strings is said to have been originally four, but in historical times there were at least seven. The disjunct octachord required eight, and more were soon added: the *μάγαδις*, with which Athenaeus identifies the *πήκτις*, is described as having 20 strings. *Τρίγωνον* is also mentioned by Plato as an instrument of large compass and contrasted with the few-stringed *λύρα* and *κιθάρα*. The only important wind instrument was the *αἰλός*. This was not a flute, but an instrument of deeper and fuller tone, more resembling our clarinet. It was made of wood, metal, or reed; sometimes, according to Pollux, of horn or bone. Pollux says it had originally but four perforations: subsequently it had a more extensive compass than any other instrument. It was regarded as a specially exciting instrument, rivalling the human voice in its effect. The *ὑδραυλίς*, a wind instrument consisting of one or more rows of pipes, played by keys and supplied with wind by water power, though invented as early as the second century B.C., becomes prominent only in the time of the Roman empire. Such metal instruments as the *σάλπιγξ* were confined to military use: and the *σῦριγξ*, a row of reed-pipes fastened together with wax, was not used by musicians, but, as Plato says, by rustic herdsmen.

392. It must be borne in mind that our knowledge of Greek music is derived almost entirely from the statements of ancient authorities, theorists, which, in the absence of musical illustration, are often exceedingly perplexing. The few examples of musical composition which have survived, including the lately-discovered Delphian fragments, are too limited in extent to aid us materially, and in no case do they appear to belong to the best period of Greek Art. The chief sources of our information, besides what can be gathered from Plato and Aristotle, are Aristoxenus, from whom Plutarch's treatise *περὶ μουσικῆς* is largely derived, and the other authorities included in Meibom's *Antiquae Musicae Auctores* (Elzevir 1653).

Among works which have appeared since Meibom it may be sufficient to refer to the following: Boeckh's great edition of Pindar, 1811-21; F. Bellermann, *Die Tonleitern und Musiknoten der Griechen*, 1847; R. Westphal, *Geschichte der alten und mittelalterlichen Musik*, 1865; F. A. Gevaert, *Histoire et Théorie de la musique de l'antiquité*, 1875-81; R. Westphal, *Die Musik des griechischen Alterthumes*, 1883; Westphal and Rossbach, *Théorie der musischen Künste der Hellenen*, 1885-9; D. B. Monro, *The Modes of Ancient Greek Music*, 1894; H. S. Macran, *The Harmonics of Aristoxenus*, 1902. The Delphian fragments, discovered in 1893, were published, with facsimiles and interpretation, by Th. Reinach, Paris, 1894, and are to be found in Smyth's *Greek Melic Poets* (Macmillan, 1900).

V. MYTHOLOGY AND RELIGION.

393. THE religion of Greece, though in its essential character it was intimately connected with the nature of the Greek people, was also, especially in details, greatly influenced by political conditions. Just as every little state had its own independent constitution, so also it had its own recognised cycle of gods, and its own manner of worshipping them. There was indeed a common basis of custom and belief underlying most of these varying rites; many groups of states met in religious confederations at a common shrine, and a few centres of worship came to be recognised and attended by all of Hellenic race. But these tokens of unity, however conspicuous, were the exception, not the rule. In a comprehensive account of Greek religion it is often necessary to speak as if there were a common and uniform system of mythology or of worship throughout Greece; but it must always be remembered that any such system or arrangement, however true in its application to Greece as a whole, would not apply in all its details to any one of the little states into which the country was divided.

Introduction;
local variations.

394. There have been and there probably will be much controversy and many opinions as to what part of the religion of Greece was brought by the Greeks as their version of the common Aryan inheritance, and what part they adopted from the earlier inhabitants of the lands, or borrowed from foreign neighbours.

National and
local elements
in religion.

It is generally admitted that the Greeks were not the first inhabitants of their country; and immigrants or invaders are usually influenced by the religion of those whom they drive out or subjugate. The notion of the omnipresence and omnipotence of a deity is usually unknown in an early stage of belief; the power of any god often has local or tribal limitations; and it is natural, under such circumstances, for the invaders to credit the aborigines with a more intimate knowledge of the nature and worship of the gods of the land, and accordingly to adopt many of their beliefs and customs. The same thing happened again, though in a less degree, when the various successive waves of Greek immigrants supplanted their predecessors, and also whenever a Greek colony was established among barbarians. The methods and degrees of adoption vary. Sometimes the ancient cults remain as popular superstitions, receiving no recognition from the official religion of the ruling caste, yet often resorted to when that official religion has failed in its function of maintaining friendly relations with the local gods, and plague or disaster has followed. Often the power of effecting a reconciliation lies with the survivors of the earlier race, who however are regarded as sorcerers rather than as priests. More frequently, however, the necessity for such special measures was averted by the formal adoption of the earlier gods and their worship into the State religion of the immigrants; this might

Methods of
adopting new
divinities.

be done in two ways; either the local god was officially added to their pantheon, as a new god with a new name; or, more often, he was identified with some god whose worship was already recognised, and whose name was perhaps amplified with a new title, while new customs were incorporated with his official ritual. The consequent concretions and modifications can alone explain how, for example, two conceptions so apparently incompatible as the 'queen and huntress, chaste and fair' of the usual mythology and the many-breasted mother-goddess of Ephesus were both called Artemis by the Greeks, while on the other hand, the identical myth and ritual ascribed in one place to Zeus is ascribed elsewhere to Dionysus. In the first case, the goddess, without changing her name, has absorbed the nature and attributes of another goddess, who, though in many respects dissimilar, yet had enough resemblance in her functions to suggest the identification; in the second a ritual, probably identical in origin, has been adopted by different families or amid different surroundings, and has consequently been assigned to the official province of different gods. Thus there was a constant tendency for all the various local cults to be absorbed into the worship of a limited number of recognised gods and goddesses, into whose personality the various local divinities were merged. And it was natural that the gods chiefly worshipped by each state or race should absorb the greatest share of these various accretions, and so extend almost without limit their attributes and their functions. On the other hand, there was a contrary tendency, inspired by the feeling of a common nationality, encouraged by the oracles and other centres of common worship, and influenced by a common literature and art, to introduce system into the chaos, and to assign to each deity his province, not so much in the patronage of a special city or race, as in the fostering and protection of certain physical, intellectual, or moral qualities or attainments.

395. The main difficulty in the study of Greek religion does not,

however, lie so much in local variations as in the various strata of ritual and of belief which we find side by side, not only in sporadic survivals, but also as part of the official worship of various cities. At first sight this variety is obscured by the prevalent custom of affiliating all kinds of ritual to the worship of the official gods of the state, and incorporating many primitive customs in their regular festivals. When we come to examine in detail the local cults of any state, we find that they include many elements which cannot readily be explained in relation to the worship of the Olympian gods, as distinguished by the anthropomorphic imagination of the Greeks, but find an easy explanation in relation to more primitive beliefs and customs. For example, the Anthesteria at Athens, officially connected with the worship of Dionysus and the opening of the wine-jars, is evidently concerned to a great extent with the tendance or exorcism of ghosts; and the dramatic performances in honour of the same deity, whether we assign their origin to the commemoration of dead heroes or to the orgiastic cult of the year-spirit, or to other primitive sources, probably have no original

Various stages of belief and ritual.

connexion with the god of the vine. Again a festival such as that of the Bouphonia or Dipolia at Athens, with its ritual murder of the ox, its condemnation of the axe, and its simulated resurrection of the victim, finds an analogy in many primitive rites that have nothing to do with the Hellenic Zeus. Such ceremonies, and the beliefs or superstitions that underlie them, can only find more or less accidental mention in a systematic account of the state worship of the Olympian gods; and in that worship they often acquire a meaning as far removed from their original intention as in the case of pagan customs or ceremonies adopted by the Christian Church. For example, magic rites, intended originally to promote the fertility and growth of the crops, seem to have become associated, at Eleusis and elsewhere, with the belief in immortality and in communion with the gods. In such cases it is the acquired meaning which is of chief interest to the scholar, as helping him to understand Greek literature and thought. But at the same time it is often necessary to go back to the original intention of a rite in order to understand much that would otherwise seem incongruous or incomprehensible.

It is often suggested or implied by writers on Greek religion that there were in it two main strata, roughly classified as the chthonic and the Olympian, the religion of fear and the religion of service, and that these two belong respectively to indigenous or primitive inhabitants, and to a conquering or immigrating race. At the other extreme is the theory stated by Herodotus, and commonly held by the Greeks themselves, that it was Homer and Hesiod who first assigned to the gods their names and their functions. This last view is held in a modified form by some modern mythologists, who think that the great change from a consciousness of mysterious powers in nature to a belief in certain definite and personal gods, from fetishism or poly-daemonism to polytheism, was not due to any immigration or foreign influence, but to a development in Greece itself of the anthropomorphic imagination which finds expression in the Homeric poems. It is not to be supposed that these poems represent the religion of the common people; this doubtless preserved many primitive elements that later came to be adopted into official cults; but the predominance and human character of the Olympian deities, which we find in Homer, is also the main characteristic of later religious beliefs. It is also probable that the artistic representations of the gods, based on this anthropomorphic imagination, reacted very strongly on the beliefs of the people.

395 *a*. The worship of sacred stones and trees is found in Greece as well as in other neighbouring countries; it is especially attested by Cretan and Mycenaean gems and by survivals in historic times. Stones, said to have fallen from heaven, may have been of meteoric origin; the Dioscuri were worshipped as two beams at Sparta, and Dionysus at Thebes as a log, later plated with bronze. Probably such stocks and stones were originally regarded as having some magic properties in themselves, and later came to be regarded

'Chthonic' and
'Olympian'
religion.

Worship of
stones and
trees

as the seat of a superhuman power or the symbol of a deity. A familiar example of sacred trees is offered by the oaks of Dodona; at Temnos the image (*ἄγαλμα*) of Aphrodite consisted of a growing myrtle (Paus. v. xiii. 7). The worship associated with rocks, springs, and trees survived throughout the country in the cult of Pan and the Nymphs; river-gods also were worshipped as givers of fertility to mankind as well as to the fruits of the earth.

We find many traces of sacred animals. Mythologists still hesitate to allow that there is evidence for anything like a totemistic system of beliefs and practices in Greece, though some tribal names suggest it. Nor is there any record—apart from the horse-headed Demeter at Phigaleia—of any Greek deity being worshipped in a wholly or partly animal form. But epithets such as *γλαυκῶπις*, *βοῶπις*, may be significant survivals, and so may the animals who are often associated with some god as his peculiar attribute, the owl with Athena for example, and the eagle with Zeus; a similar origin may underlie the tales of the various transformations of gods into animals, Zeus into a bull or eagle or cuckoo, Poseidon into a horse, and so on. There were also rites in which the worshippers were called animals or imitated their shapes, as in the bear dance of Athenian maidens for Artemis Brauronia, or the men called *ἵπποι* in the worship of Dionysus. The snake, too, was often regarded as an embodiment of chthonic deities or heroes, for instance, of Asclepius and of Erichthonius at Athens.

The cult of ancestors, or of the dead generally, is to be seen not only in the recognised custom of offerings at the tomb, but also in survivals which vary from the worship of heroes to magic rites for the exorcism or propitiation of ghosts. The latter is most conspicuous in the Attic festival of the Anthesteria, where it is strangely mingled with a Dionysiac festival. Hero-worship is sometimes preserved in a simple form, as in the case of the founder (*οἰκιστής*) of a colony; but frequently ancient local divinities come to be degraded to the rank of hero, as in the case of Trophonius at Lebadea, and in this case they often came to be associated with the worship of an Olympian god. On the other hand, heroes such as Amphiaraus and Asclepius sometimes attained almost divine honours.

It is clear from what has already been said that we must expect to find Greek mythology and ritual compounded of elements belonging to various strata of religious belief and custom. In the most primitive stage, a god is actually identified with some sacred object or animal, or even a human being; he must naturally require peculiar care and observances, and may be amenable to direct punishment by human agency if he fail in his duties. Even when religious ideas have reached a higher plane, and the god is regarded as having an independent existence, but becoming incarnate or immanent in his sacred emblems, the same ritual would be applicable. But the almost infinite subdivision of the divine power, by which each divinity was restricted to a very narrow

class of objects or functions, yielded by very slow degrees to the generalising tendency which developed polytheism out of polydaemonism. With a higher and more worthy conception of deity the interpretation of rites and customs would also be given a higher meaning, and this might in time affect the rites themselves. A sacrifice, at first regarded as an actual meal provided for the god, would next become an offering of which only the more ethereal portion, the savour, was actually received by him; and finally would be regarded as a symbolical dedication to him of what was useful to the life of man, and so acceptable as homage, though not necessary for his sustenance. And again, those arts of sorcery and magic, which in an earlier stage were employed by men to force or persuade their god to do their will, gave place to the art of divination, by which men tried to learn the will of the god in order to conform to it. In Greek religion we find side by side traces of all these various stages, some of them probably surviving from the primitive inheritance which they brought with them from their original home, some adopted or borrowed from those whom they conquered or with whom they came in contact, some due to the development in Greece itself of new religious conceptions, mainly under the influence of poetic imagination.

V. 1. MYTHOLOGY.

396. THE origin of myths has always been a matter of keen and often unprofitable controversy; it is now generally admitted that no one system of interpretation is universally applicable, but that Greek mythology was derived from many different sources.

Various systems of interpretation of myths.

Many religious customs and ceremonies exist of which the true meaning and origin are either entirely forgotten or preserved only by a vague and uncertain tradition. Stories naturally grow up to explain the reason of such ceremonies, which then come to be explained as derived from the myth which has grown out of them. For example, because the mystae wandered about fasting in the dark at Eleusis, it was said that Demeter herself had done the same. This is a principle of very wide application; but where the Greeks themselves had lost all knowledge of the origin and meaning of a custom, we cannot expect to arrive at any satisfactory results by mere conjecture. Here the comparative method of study is invaluable. When we find similar customs prevalent among all European peoples on certain occasions, such as spring or harvest, we are justified in concluding that the meaning and origin are probably in all cases the same; and it is very often possible to find some examples among primitive or conservative peoples which show that meaning with a transparent simplicity. We may safely apply this interpretation to more complicated ceremonies also, and to the myths which have grown out of them. And sometimes, even when no such direct relation or influence can be assumed between similar ceremonies among

1. Myth as interpretation of ritual.

different peoples, the ceremonies of a civilised race may be explained on the analogy of those observed by a primitive or savage one. But this principle must be applied with the utmost caution: it rests on the justifiable assumption that the working of the human mind is usually similar under similar conditions; great care must however be taken in investigating every particular case, to make sure whether the nature and intention of the ceremony are really analogous.

Ceremonies connected with human employments, such as seed-time and harvest, are dependent on the course of nature, and thus the myths belonging to them also reflect the succession of the seasons or of other natural phenomena. But there is another class of myth derived more directly and obviously from these natural phenomena; the clearest case is that in which some natural object is actually personified; for example, Helios (the sun), or river-gods. This principle of interpretation has been applied by some mythologists with so little discrimination as to have brought it into undue discredit; the solar myth, in particular, has become almost a byword from its unlimited use to explain almost every kind of story. Great caution is necessary in this case also; we must especially avoid attributing to primitive religion fanciful interpretations such as belong to a later age. Here too the comparative method is a help. It is safer to investigate how other primitive peoples speak of the powers of nature, than to exercise our ingenuity in imagining how the ancestors of the Greeks may have conceived of those powers. And while we may rarely be able to place the fundamental conception of any of the chief Greek deities in a mere impersonation of a natural object or phenomenon, we may yet admit that an association with such objects or phenomena has had a considerable influence upon their character and attributes.

There is another system of explanation of which an extreme application was made by the philosopher Euhemerus (about the end of the fourth century B.C.), who suggested that the gods were merely men who had been accorded divine honours for their exploits or beneficence; thus even Zeus was merely a great conqueror, who died and was buried in Crete, and afterwards came to be deified. Few, if any, would now apply such a system as this to the interpretation of all mythology, although some mythologists regard ancestor-worship as the most important element in early religion. But the line between gods and heroes is clearly marked in Greece, although some individuals seem to hover between the two categories; and although many heroic legends, such as those of the siege of Troy and the return of the Heracleidae, doubtless contain a nucleus of historical fact, the same origin cannot often be assigned to the mythology of the gods. In some cases, however, the stories told about a god may be influenced by the history of his cult; thus the wanderings of Apollo or Dionysus are often thought to reflect the route by which their worship had spread.

2. Myth derived from natural symbolism.

3. Myth as transformed historical tradition.

The extreme theory that 'myth is a disease of language' would hardly now meet with much acceptance, and even the stock example that Apollo's association with the wolf is due to a misunderstanding of the epithet *λύκιος* or *λύκειος* cannot be allowed. But there are doubtless many instances in which an attempt to explain some name or epithet has either led to the existence of a myth or modified its form: the various explanations given by ancient authorities of the epithet *τριτογένεια* suffice to show how this might happen.

4. Myth derived from verbal resemblances.

Artistic types had a considerable influence on Greek mythology, at least in its later, classical, form. In an early stage, Art is very rarely original, except in detail, and is most conservative in the repetition of a limited number of fixed types, both for the figures of the gods and for the representation of mythical scenes. And where a mythical person or scene had no recognised artistic type, it was very common for some other accepted type to be modified and adapted to fit it. Thus various myths influenced one another through their artistic representations; and sometimes a type, at first almost fortuitously chosen, came to meet with wide acceptance. Thus the Sphinx and the Sirens, for example, owe their form in later myth to their being first rendered in Greek Art by purely decorative forms borrowed from the East.

5. Myth due to representations in Art.

Elaborate and fanciful allegories, such as may be seen in the myth of Cupid and Psyche, are not earlier than the Hellenistic age. But a simpler and more direct kind of allegory is to be traced in earlier mythology. The personification of moral forces, such as Ate and the Erinyes, partakes to some extent of this nature. But we must guard against such excessive appeal to allegory as was used by the Neo-platonists in the interpretation of myths.

6. Myth derived from allegory.

397. Besides the sources of mythology, we must also notice a classification which, though it cannot be followed systematically, we must not altogether overlook. This classification depends to a great extent on the class of the population to which certain myths especially belong, and also has a relation to the circumstances which have led to the preservation of so much of Greek myth as has been recorded. We may divide mythology into (1) popular, (2) official, (3) poetical, and (4) philosophical. The first is of course the basis of all the others, and if we could get at it directly, our study would be greatly facilitated. But mere folk-lore was not often likely to be preserved in its natural state, either by literature, inscriptions, or art; and so we are usually obliged to deal with its indirect reflexions, according as it is taken up into the system of organised State religion, or made a basis for the imaginative tale of the poet, or for the allegorical application of the philosopher. Sometimes, however, a myth may happen by some accident to have been recorded in its popular and primitive form; more often that form can be inferred from the official or literary version, by comparison

Classification of myths.

(1) Popular.

with similar rites or stories preserved to the present day either in Greece or among other peoples. **Official** mythology, as recognised

(2) **Official.** by the various cities of Greece, has naturally been recorded to a great extent both by literature and inscriptions, though not always in such a way as to allow us to distinguish the purely local myths from those which were more generally accepted; later compilers have done much to increase the confusion. **Poetical** mythology is what we

(3) **Poetical.** always speak of first when we speak of Greece; within it there are many degrees of relation to popular mythology, on which it also had a decided influence. Homer has been called 'the Bible of the Greeks,' and although the works known under Homer's name did not claim any special divine sanction or infallibility in matters of ritual and belief, their universal acceptance had a great influence on Greek religion, and even on the popular conception of the gods. In later writers we meet with every variety in the treatment of myth, from attempts to arrange and to record the true mythical tradition to poems in which the mythological names are mere pegs on which to hang studies of contemporary life and character. In reading ancient mythologists we must be on our guard against an apparent uniformity and system which is often introduced by the compiler rather than inherent in his subject. The **philosophical**, and especially the mystical form taken by some

(4) **Philosophical.** myths, mostly in later times, is really outside the domain of mythology, and is not likely to mislead a cautious student.

398. The conception of a god existing before the world and creating it is entirely foreign to the mythology of the Greeks. To them Zeus and his Olympian colleagues, the present rulers of the universe, had not existed from the beginning, but had predecessors. In Greece the myths of the origin of the world and of the earlier divinities are of a very complex nature. Some of them represent crude physical theories as to the origin of the universe; others may refer to the earlier inhabitants of the country and their deities, who were actually superseded by the Greek pantheon. The miscellaneous and heterogeneous elements were gathered together and brought into an apparently consistent system by works like the *Theogony* of Hesiod; a good deal of this system must be regarded as the theory of professional mythologists rather than as genuine mythology.

Homer makes Ocean the origin of all things, including the gods. According to Hesiod, Chaos was the first of things; then came Earth, Tartarus, and Eros—a conception clearly embodying some early philosophical speculations like that parodied by Aristophanes, who joins Eros with such *primaevae* abstractions as Chaos, Night and Erebus in the origin of the universe. In the Hesiodic system Erebus and Night follow as the children of Chaos, and from this pair proceed Aether and Day. Earth produces Heaven; and then from this pair, Uranus and Gaia, comes the brood of the Titans, the

Cosmogony,
Theogony, etc.

Origin of the
gods.

youngest of whom is Cronos. Gaia stirs up her children against their father, and provides for Cronos the sickle with which he mutilates Uranus. Where his blood fell on the earth, arose the Giants, and the Erinyes; from that which fell into the sea proceeded Aphrodite. Cronos and his sister Rhea are the parents of Hestia, Demeter, Hera, Hades, Poseidon, and Zeus. Cronos swallowed all his elder children, but when the turn of Zeus came, Rhea substituted a stone. The rest of the principal Greek gods were the children of Zeus;—Athena, Apollo, Artemis, Hephaestus, Ares, Hermes, and Dionysus. Zeus and the other children of Cronos fought long against the Titans, and prevailed finally by the help of the Hecatoncheires, monsters which Gaia had borne to Uranus, and which their father had bound beneath the earth. The story of this contest has left but few traces in art; but another variation on the same theme, the battle between the gods and the giants, which cannot be traced back in mythology beyond the sixth century B.C., gained a much greater hold on popular belief, and is one of the commonest subjects for art in all periods. It was regarded as typical of the triumph of Greek over 'Barbarian,' of civilization and culture over brutality and violence. The Titanomachy and Gigantomachy were not unnaturally confused by the Greeks themselves in later times, even the names of the combatants sometimes being transferred from the one to the other. The prevalence of order in nature over destructive or irregular powers was also associated with this myth, and it was accordingly localised in regions noted for rugged scenery or volcanic phenomena, such as Pallene, earlier called Phlegra, or the Phlegraean plains near Cumae in Italy. All the gods, including Heracles, took part in the fight; Poseidon hurled the island of Cos (or Nisyros) upon his opponent; according to another tale a Giant or Titan was buried beneath Etna.

Overthrow
of the Titans

and of the
Giants.

The most interesting among the Titans are the family of Iapetus; the stories about them have to do with the origin or earliest history of mankind. His wife was a daughter of Ocean, either Asia or Clymene, and among his children were Atlas, who held up the sky above the earth, Prometheus, and Epimetheus. Prometheus, according to Hesiod, took the part of men, cheated Zeus over his share of sacrifices, and stole fire from heaven. To requite him, the gods fashioned Pandora, who was the first woman. The origin of mankind is here left in confusion. It was a common belief that the human race had arisen from the earth, especially in the case of 'autochthonous' races or heroes, or had proceeded from rocks or trees; some families claimed direct descent from the gods and from nymphs. According to the most accepted genealogy, Deucalion was the son of Prometheus; he and his wife Pyrrha were the sole survivors of the Flood; after it they cast stones behind them which became men and women—a myth which evidently attempts to reconcile the two versions. Deucalion's son was Hellen, who was the ancestor of all the Greeks through their

Origin of
mankind.

eponymous ancestors Aeolus, Dorus, Achaeus, and Ion. The belief that men were made out of clay by the gods seems to be found in the fifth century; later it is Prometheus who thus moulds both men and beasts.

399. In any organised system of polytheistic mythology, it is almost necessary that a certain limited number of gods and goddesses should be recognised as the principal divinities.

The principal gods; their number.

These were often grouped together in certain definite numbers, such as the triad of the often-recurring Homeric formula, *Ζεὺς τε πατὴρ καὶ Ἀθηναίη καὶ Ἀπόλλων*, and each state usually had its special group that was invoked in oaths and solemn ceremonies. The recognition of twelve as the proper number of the chief divinities seems to be early and widespread: but there were great discrepancies among the Greeks themselves as to what gods should be included in the number. On an archaistic altar of later period, which however may go back to an Attic original, we find, grouped in pairs, Zeus and Hera, Poseidon and Demeter, Apollo and Artemis, Hephaestus and Athena, Ares and Aphrodite, Hermes and Hestia (Dionysus being omitted). But the twelve deities on the Parthenon frieze, consisting of seven gods and five goddesses, imply a different selection. The altar of the twelve gods at Olympia included Cronos, Rhea, Alpheus, and the Graces; and in groups of the gods upon vases, even where the number twelve is found, it is sometimes made up of pairs of consorts, such as Poseidon and Amphitrite, Dionysus and Ariadne; so that the selection often seems arbitrary. Except Hades, all the rest seem to be regarded as habitually present at the court of Olympus, to which Heracles was also formally admitted, though he does not usually appear there in artistic representations, except in those which refer to the occasion of his admission.

400. The monarchical system of government was prevalent among the

Greeks at the time when their mythology was settling into its accepted form; and hence it was no violation of their polytheistic beliefs to acknowledge one supreme ruler over gods and men. Such a supremacy was generally attributed to Zeus by all the Greeks, even in states where some other deity was the chief object of worship, as Athena was at Athens; and thus he came to absorb into himself all the essential characteristics of the supreme god, which often varied greatly from place to place.

(a) As supreme ruler of all above the earth, Zeus has control over the weather: the thunder is his sign; the rainbow (Iris) and the eagle are his messengers; he is *νεφεληγερέτα*, *ερίδουπος*, and also *σῆριος* and *εὐάνεμος*.

(b) In relation to mankind, he is the giver of victory, irresistible in battle whether waged by gods or men. Beside the thunderbolt, the aegis is his peculiar attribute in this capacity; he lends it to Athena and occasionally to Apollo; but Zeus is peculiarly *αἰγίοχος*. This aegis was said to be the skin of the goat Amalthea; but an association with the word *καταιγίς* (*ἄισσω*),

lord of manhood and battle,

early affected its symbolism (see also § 402). Zeus is also the god of prowess in battle and of all manly excellence (*ἄρειος, σθένιος*); hence two out of the four great athletic festivals of Greece were in his honour, the Olympian and the Nemean, besides many others, such as the Sthenia at Argos and the Arcadian Lycaea.

(c) Zeus, as supreme ruler, is the source of all moral order; in this capacity his consort is Themis, and he delivers the *θέμιστες*, those universal and unwritten laws of right and wrong which are the origin of all human law and custom. He is therefore the punisher of guilt, especially blood-guilt, and also the purifier (*ἀλιτήριος* and *καθάρσιος* or *μειλίχιος*); he is the especial protector of suppliants (*ἰκέσιος*). To find out his will as a guide to conduct is the object of oracles and of divination.

(d) As king and father of gods and men, Zeus presides over all social and political ties and organisation. The altar of Zeus *ἑρκείος* stood in the court of every house; as *τέλειος* he presided over marriage, and as *κτήσιος* over the prosperity of the household. Passing beyond the family to the clan, he is *φράτριος*, and as *βασιλεύς* he is head of the State. The king rules not only as his priest but as his representative, often by hereditary descent; a symbol of this power was the sceptre, sometimes, as at Chaeronea, itself an object of worship. As governments became more democratic in form, they still owed their sanction in council and assembly to Zeus, *βουλαῖος* and *ἀγοραῖος* and *ὄρκιος*. He is especially the common god of all of Greek race, as *Ἑλληνίος* or *Πανελληνίος*, and in an even wider sphere, as *ξένιος*, he enforces the universal rights of hospitality. He was worshipped as *σωτήρ* and *ἐλευθέριος*, especially after a great deliverance like the Persian wars.

(e) Lastly, to those who had advanced to a monotheistic stage of belief, Zeus was the name of the one god, the beginning and end of all things; in mystic, pantheistic philosophy he becomes a mere abstraction, as in the Orphic poems.

The Greeks themselves attributed the origin of the worship of Zeus, like that of the Hellenic race, to Thessaly; and Mount Olympus was his chosen home. The Olympian cult came to be universally recognised as the orthodox form of the worship of Zeus; it found a centre at Olympia in Elis, which in later times almost superseded its original home in northern Greece.

Dodona possessed the oracle already famous in the time of Homer, who attributes it to the Pelasgian Zeus, and mentions the service of the primitive priestly race, the *Σέλλοι*. See § 426.

In the Peloponnese we find the worship of Zeus established, in a primitive form, upon several conspicuous mountains. Chief among them is Lycaeum, which also had the name Olympus. We are but imperfectly informed as to the ritual at this place; it seems to have been very primitive and probably to have included human sacrifice.

The worship of Zeus in Attica also preserves many primitive features. He was worshipped as *πολιεύς* on the Acropolis, and there was also an altar of Zeus *ὑπατος* near the Erechtheum, of which the foundation was attributed to Cecrops. A primitive sacrifice to Zeus (probably at the threshing season) was at the Dipolia or Buphonia; this was no common sacrifice but a murder (*φόνος*), for which the axe used was ultimately condemned and banished; the hide of the bull sacrificed was stuffed and set up again. The worship of Zeus Olympius at Athens cannot be traced back beyond the time of Peisistratus, who, however, probably founded the Olympieum on the site of an earlier temple of Zeus.

The legends of the birth and childhood of Zeus, which are generally adopted in later mythology, appear to belong in their origin to Crete, where also their scene is usually placed, though the Cretan Ida sometimes gives place to the Phrygian Ida, which seems in many ways to be closely connected with it in mythology. In a cave on mount Ida, or elsewhere in Crete, the infant Zeus was concealed by his mother Rhea, with the help of the Curetes, whose dance in armour, interpreted as a device to drown the cries of the child, was probably in its origin intended as a more direct defence against dangerous powers. The death of Zeus was also a theme of Cretan legend, and was quoted by Euhemerus in support of his famous theory, though it need cause us no surprise in the case of a god so closely identified with the powers of nature.

Hera was generally acknowledged in later organised mythology as the consort of Zeus. But in some early centres of his worship we find another consort, Dione, for example, at Dodona and at Athens; and Leto seems to claim also the position of a legitimate wife. Apart from allegorical unions, such as those with Mnemosyne, mother of the Muses, or Themis, mother of the Hours and Fates, we also find many tales of the love of Zeus for nymphs or for mortal women. These stories occupy a very prominent part in literary mythology, on account of the scope they offer for poetical description. Their origin is not in all cases similar. In some instances the nymph was the chief goddess of the place, and has sunk into a subordinate position before the jealousy of Hera, of which she often is the victim in the story; in others, the ancestress of a heroic race is merely a genealogical invention, and her union with Zeus is the result of the ambition, common to so many of the princely families of Greece, to derive their lineage in a direct line from 'the father of gods and men.'

Zeus is represented in Art as the ideal of ripe manhood, bearded, with a face full of majesty and benignity. In early times he is often represented standing or advancing, with a thunderbolt in his hand; but this conception of his power was superseded by the more dignified conception of the god enthroned, which, after the great statue made by Pheidias at Olympia, came to be so

Attic worship.

Cretan tales of birth of Zeus.

Consorts of Zeus.

Representation in Art.

universally accepted that it was difficult for a Greek to conceive of Zeus under any other form. In earlier Art the thunderbolt is his usual mark of identification; and, especially in later times, he is frequently accompanied by the eagle.

401. **Hera** is in orthodox Greek mythology the legitimate consort of Zeus, and this conception seems to underlie all her functions. She represents the female principle in nature, as Zeus does the male; hence the popular spring festival of universal occurrence, which celebrates the union of the two as essential to the continuation of life in plants and animals, finds its obvious recognition in the *ἱερὸς γάμος* of Zeus and Hera. She presides over the life of women as Zeus over that of men, and is in particular the goddess of marriage (*γαμηλία, τελεία*) and of childbirth; in this last capacity she is *εἰλειθυία*, or *Eileithyia*, sometimes the *Eileithyiae*, her daughters, are associated with her. The classical worship of Hera seems also to have absorbed the worship of a primitive goddess worshipped in the form of a cow—a worship of which we may notice many survivals in her cult and myth, especially in the Homeric epithet *βοῶπις*, and in the Argive legend of Io, who is transformed into a cow by the jealousy of Hera, and is probably to be regarded as a mythical double of the goddess herself.

2. Hera,
character.

In Homer (*Il.* iv. 51) Hera claims Argos, Sparta, and Mycenae as her especial cities; and it seems probable that the earliest centre of her worship in Greece was the Heraeum which lies between Argos and Mycenae, nearer to the latter. Hence her worship appears to have spread to Samos, and to the Lacinian promontory near Croton in S. Italy, both of which became especially famous for it, as well as to many other sites in Greece. The most prominent festival in the majority of these places seems to have been the *ἱερὸς γάμος*, and it is connected with other ceremonies easily paralleled in popular custom, such as the carrying of the image of the goddess down to the seashore, hiding it in a bush, seeking for it, and conducting it back in festal procession when found. In the case of Hera, these ceremonies were especially associated with the bridal bath and the marriage procession; in the spring of Canathus, at Nauplia, she yearly renewed her virginity. Games of prowess, especially races, for girls only, were held in honour of Hera at several places, especially at Olympia, where her temple was of very ancient foundation. To this Olympian festival women only were admitted, as men only at the games in honour of Zeus. Hera appears also as the protector of heroes, especially in the legend of Jason and the Argonauts, but her association with a Minyan tale is curious, for little early evidence of the cult of Hera has been found in Northern Greece. Like all divinities whose cult is closely connected with the changes of nature, she also had an offended or sullen aspect; at Stymphalus she was worshipped as virgin, wife, and widow; the darker side of her worship was developed in poetical mythology in the various tales of her quarrels with Zeus and her jealousy of his other

Local cults.

consorts, which may also represent in some degree the jealousy of the orthodox worship of Hera against other local goddesses who took her place as consort of the chief god.

In Art Hera appears either as a dignified matron or queen, or in her more youthful aspect as the bride of Zeus; in either capacity her special attributes are a high decorated crown (*στεφάνη* or *πόλος*) and full rich drapery; she usually carries a sceptre, often a pomegranate; in the Heraeum at Argos her seated statue by Polycleitus, in gold and ivory, was the most famous of all; her sceptre there was surmounted by a cuckoo, because Zeus was said to have visited her in that form. Among the earliest remains of Greek sculpture is a colossal head from the temple statue in the Heraeum at Olympia; the Farnese head at Naples, and others in the Ludovisi collection at Rome are the best known examples of her type. Her sacred bird, the peacock, stood in her temple, and is reproduced on coins of Argos.

402. **Athena** appears in early times as the chief deity of many places,

giving increase to the fruits of the field and of trees and also to the youth of her people, and bestowing prowess and victory in war and skill in the arts of peace. In later times the brighter

3. Athena,
character.

and more intellectual side of her character came into prominence, and, especially as the patron goddess of Athens, she came to be regarded as representing the pre-eminence of the Greek genius in art, literature, and science. Athena was said to have been born from the head of Zeus, with

Myth of
birth, etc.

the help of an axe-stroke given by Prometheus or Hephaestus (Zeus, according to some legends, having previously swallowed her mother Metis, daughter of Ocean, because of a prophecy

that her offspring would be stronger than its father). Many places claimed to be the scene of her birth, especially such as had a river or lake Triton or Tritonis (cf. *τριτογένεια*). She is often spoken of as *κόρη Διός*, and she alone shares many of his functions and powers; her special attribute is the aegis, in which is set the head of the Gorgon, which she either slew herself (according to the Attic legend) or by the instrumentality of Perseus (the Argive version). Her commonest epithet is *γλαυκῶπις*, of which the exact force is doubtful, though it cannot be dissociated from the owl, which constantly appears in Athens and elsewhere as the companion or the symbol of the goddess. Her poetical name Pallas is not easy to explain; it may probably be associated with her worship in the Attic district Pallene, and also with Pallas, a giant or Titan whom she slew; some etymologists derive it from *πάλλω*. Her name in Epic Greek is *'Αθήνη*, *'Αθηναίη*; in Attic, *'Αθηνᾶ*.

The worship of Athena in her chosen city, Athens, was of pre-

Attic cult.

dominant influence: in connexion with this two stories are most prominent—that of the birth of Erechtheus (or Ench-

thonius) and that of the contest of Athena and Poseidon for the land, when Athena produced as her symbol the sacred olive tree in the Erechtheum,

and Poseidon either the salt spring in the same building or the horse. In honour of Athena the Panathenaic games were celebrated at Athens; they included athletic, musical, and warlike sports; the chief ceremony of the whole festival was the dedication of the peplos, woven for the goddess by maidens and women in her service. Her statue was also taken down to the sea and bathed once a year, in early summer, at the plynteria.

The more warlike aspect of the goddess was prominent in Athena Itonia, worshipped in Boeotia and Thessaly, and was not unknown in Athens. Thus too she is the protector of heroes in war (*σθενιάς, ἀρεία*); she is Athena *νίκη* or *νικηφόρος*; she is also the tamer of the horse (*ἱππία, χαλινῆτις*), and she teaches men how to make ships, especially the ship Argo. In her more peaceful aspect she is *κουροτρόφος, ὑγίεια*, and presides over the city at Athens and elsewhere, as *πολιούχος, βουλαία*. As Ergane she is the patroness of all kinds of crafts and handiwork, especially weaving (*ἔργα Ἀθηναίης*). She protects agriculture, and especially the olive, and is honoured by musical and orchestral performances; she invented the flute. Especially she is the goddess of enlightenment, of reason and thought, and so of art and science, and in her own Athens the clearness of the air and of the intellect were associated with and attributed to her. In later Greece she represented Attic culture, and her statue was set up in libraries.

In the earliest representations Athena is represented as fully armed and striking with raised spear, sometimes with a distaff in the other hand as representing the other nature of the goddess. Her most famous statues at Athens were the colossal gold and ivory statue within the Parthenon and the colossal bronze statue (sometimes wrongly called *πρόμαχος*) outside it, both by Pheidias.

403. **Apollo**, as familiar to us in his poetical and artistic representations, is the god of light (Phoebus) and youth and music, often too the god of the sun, and sometimes consciously identified with Helios. But, though this side of his character is most prominent in historical times, and especially in literature, it is a mere perversion of ingenuity to attempt to derive from it all his mythological functions. Apollo was the chief god of several divisions of the Greek race, and as such was the protector of youth (*πατρῷος, κουροτρόφος*), the leader of colonies (*ἀρχηγέτης*), the fosterer of flocks and herds (*νόμιος*), the guardian of streets (*ἀγυιεύς*), and especially the god of expiation and purification, and the lord of oracles. Several of his festivals are clearly of primitive origin, and celebrate the renewed vigour of the spirit of vegetation in spring.

Leto, the mother of Apollo and Artemis, was associated with them in worship in many places. She wandered long before their birth, and according to a Boeotian legend was changed into a wolf; a cause was found by later mythology in the jealousy of Hera, as the legitimate consort of Zeus. The wandering

Other local
cults.

Represent-
ation in Art.

4. Apollo,
character.

Delian myth
of birth and
origin of wor-
ship.

island of Delos was fixed, and became the birthplace of the god, who was born the seventh day of the month, therefore sacred to him. Such was the Delian myth, which came to be universally accepted, and even the Delphic worship was said to have been founded by the god after a journey from Delos, though many other places claimed his birth by ancient legend. Many places have the legend of the *ἐπιδημία* and *ἀποδημία* of the god, who spends his summers among his worshippers, his winters elsewhere, usually with the Hyperboreans.

Apollo, though worshipped by the Dorians, does not belong exclusively to them in origin. Miletus and Delos were Ionian, and his earliest Peloponnesian worship at Amyclae, where he was associated with Hyacinthus, is earlier than the Dorian immigration, though adopted by the Spartans as their national cult. The Hyacinthia, a festival of three days in the middle of summer, included mourning over the death and rejoicing in the revival of Hyacinthus. The Carneia at Sparta were musical and military games. The Peloponnesian rites as celebrated by the Dorians were doubtless influenced by the Delphic worship which was also predominant in the north of Greece. At Delphi, the return of the god in spring was celebrated at the Theo-

Delphic cult. phania; in the following month, at the Theoxenia, Apollo was entertained with a sacred banquet by the Delphians, and received the other gods as his guests. The greatest of the Delphic festivals, the Pythia, were held in summer every fourth year, and celebrated the victory of Apollo over the Python. The worship of Apollo Pythius, derived from Delphi, is found throughout Greece. In or near the Delphic temple was the navel of the earth (*ὄμφαλός*), and here too the oracles were given by the Pythian priestess. Apollo had many other oracular shrines, notably those at Miletus (*Branchidae*), at Abae in Phocis, and at Mt Ptous in Boeotia. Every eight years—probably at every other celebration of the Pythia—the death of the dragon Python and the blood-guiltiness and flight of Apollo were commemorated in the *σεπτήριον*; a boy representing the god had to fly to Tempe; there he was purified, crowned with the sacred bay, and escorted back in the *δαφνηφόρια* to Delphi. The great Apolline festivals at Athens were the *θαργήλια* on the first day of which two men, the *φαρμακοί*, were led out as if to be sacrificed as an expiation; and the *πανέψια*, a rejoicing over the first-fruits of the harvest, which were carried round on a branch called *εἰρεισιώγη*. The time of the Theoria or sacred embassy to Delos was also regarded as a specially sacred season in Athens.

Special forms of Apollo which appear to be of a primitive nature are *λύκιος* or *λύκειος*, sometimes associated with Lycia, but evidently implying that the god took the form of a wolf, as in Argive myth and on Argive coins. Epithets like *σμιμβεύς* and *παρνόπιος* find a more plausible explanation in the warding off of pests such as field-mice and locusts. Apollo was frequently invoked as the

Association
with animals.

sender and consequently also the stayer of plague (*ἀλεξίκακος*), and the giver of sudden death. As healing god (*παιών, παιώνιος*) he is the father of Asclepius. He is especially the god of suppliants seeking purification, as in the case of Orestes.

In early times he is often represented as bearded; later he is the ideal type of youth and was set up with Hermes and Heracles in gymnasia; the effeminate type of later Art is a mere degradation. His constant attributes are the bow and the lyre; the tripod and bay are especially connected with his Pythian worship, the gryphon with his journey to the Hyperboreans.

Represent-
tation in Art.

404. Artemis figures in later mythology and art as the feminine counterpart of Apollo, the virgin huntress and type of vigorous maidenhood, and also as goddess of the moon; but here more than in any other case the name was used to include many different and even inconsistent conceptions. Many ancient local goddesses were either identified with Artemis, or associated with her as attendant nymphs. She shares with Apollo the myth of her birth, but it was said to have happened in Ortygia, a name assigned in this connexion to various cities, such as Ephesus and Syracuse, and later to Delos. She also shared the worship of Apollo in most of his sacred places: but her separate cult is evidently more primitive. She appears as the goddess of free and wild nature (*ἀγροτέρα*) especially in connexion with mountains, groves, and springs. Thus in Arcadia Megisto and Callisto, the ancestresses of the Arcadian race, were forms of the goddess herself; with the name Arcas we may compare the bear-dance performed in honour of the Brauronian Artemis at Athens. She gives increase to all wild creatures and protects their young (*πρόνια θηρῶν*); and extends the same protection to flocks and herds and to mankind: in this connexion, and as a lunar goddess, she is especially the goddess of women, their protector in childbirth (*λοχία*), and the giver of life and death. Maidens frequently made offerings of dress to her before their marriage (*χιτώνη, λυσίζωνος*). She was the patroness of hunting and hunters, and honoured with gifts of the chase (*δίκτυνα* in Crete, *λαφρία* in Calydon). Human sacrifice to her seems preserved in the tale of Iphigenia (herself a form of the goddess) and in the scourging of Spartan boys till their blood ran on the altar of Artemis Orthia. The Tauric Artemis, whose worship was said to have been brought with her image from Thrace by Orestes and Iphigenia, was also propitiated with human sacrifice; her name seems to imply a connexion with herds. Artemis appears also as the protectress of civil and political life (*εὐκλεία, σωσίπολις*).

5. Artemis,
character.

Several other goddesses seem to be regarded as little more than varying names for Artemis; such are Bendis in Thrace, Britomartis in Crete, and others. Hecate is the goddess of roads and passages, and her image was set up at places where three ways met (*τριοδίτις* = trivium); her triple form is said not to be older than

Identifi-
cations.

Alcámenes (end of fifth century). She is the goddess of night, of goblins and of magic, and of the underworld; also of the moon and of other functions of Artemis. Nemesis, or Upis, of Rhamnus, was also regarded as a form of Artemis. The name Artemis was also given to some of the great mother-goddesses of Asia Minor, notably at Ephesus, where her many-breasted image shows a conception far indeed removed from the ideal Greek huntress.

In early Art, Artemis is often represented with a high crown or *πόλος* on her head, and grasping a wild beast, leopard or lion or stag, in one or in each hand; this is clearly an imitation of oriental models, but survives traditionally even till late times: in statues she appears either in full flowing drapery, or in short chiton and often hunting boots; she carries the bow and quiver; sometimes also a torch, especially as Hecate.

Represent-
tation in Art.

405. It was the current notion of **Hermes**, from the time of Homer, that he was the herald and messenger of the gods (*διὰ-κτορος*). But he has another aspect as a giver of increase, especially to flocks and herds. As such he was especially

6. Hermes,
character.

worshipped in Arcadia, where his mother, Maia, bore him in a cave on Mt Cyllene. His image, here and elsewhere, was the symbol of generation in its crudest form; and this character was constantly present in the conventional images of the god (Hermae). The Homeric hymn to Hermes represents him as the inventor of the lyre and as the thief of Apollo's cattle; in both tales there may be a reflexion of the rivalry between the early cults of two similar deities, and their partition of functions in orthodox mythology; the two were often worshipped side by side. Both alike are patrons of youth (*κουροτρόφος*) and of the palaestra; both protect flocks and herds (*νόμιος*), and Hermes *ἐνόδιος*, like Apollo *ἄγνιεύς*, has his statue in roads. Rude statues of Hermes were constantly set up also as boundaries, over which he especially presided. In the Argive legend, Hermes was sent to slay the many-eyed giant Argus, the guardian of Io when transformed to a cow; hence his constant epithet *ἀργειφόντης*; he beguiled Argus with music, and then cut off his head with the *ἄρπη*, the same weapon, which, with his winged sandals, he lent to Perseus to slay the Gorgon. In Boeotian legend, he gave the flying golden ram to Phrixus, and the lyre to Amphion, who drew beasts and stones by its power. At Tanagra, where his birthplace was claimed by Mt Cerycion, there was an annual ceremony in honour of Hermes *κροφόρος*, when a youth representing the god bore a ram on his shoulders round the town. This was said to be in memory of a plague he stayed. As god of wayfarers, Hermes was represented by rude or unwrought stones along the roads; he was the god of commerce, and also of all cunning and even theft; and also of luck and treasure-trove (*ἐριούνιος*). As herald, he gave skill in speech, and he was also the conductor of wayfarers on their last journey to Hades (*χθόνιος, ψυχοπομπός*).

Besides the rude images already mentioned, we find Hermes usually represented in early Art as a bearded man; later, as beardless. The herald's staff (*κηρύκειον*) is his constant attribute, and he also has wings on his feet, or winged sandals, and a winged cap. In later Art he is usually the swift messenger of the gods; sometimes the god of commerce, with the purse, or, represented as speaking, the god of oratory (*λόγιος*). Calamis made a statue of him at Tanagra as Criophorus, and Praxiteles as carrying the infant Dionysus at Olympia. In the beautiful Naples bronze he sits ready for flight.

Represent-
ation in Art.

406. Dionysus or Bacchus is in later poetical mythology the giver of wine and of its pleasures, the leader of the rout of maenads and satyrs, and the patron of the drama. This is however only one side of his real mythological character; more than in the case of any other Greek deity, the worship of Dionysus is bound up with primitive and popular customs and ceremonies, in which he is worshipped as the god of vegetation (*δενδρίτης*); and even the orgiastic dances in his honour are not so much the results of intoxication as magic invocations of the god at critical periods. Dionysus is barely mentioned in Homer; his official and poetical recognition belongs to a later time. His introduction from abroad is a constant feature in myth; but although some of the orgies celebrated in his honour may be traceable to Thrace or Phrygia, his worship is not entirely of foreign origin, and even his name appears to be Greek, and must probably be connected with Nysa, the mountain where he was brought up; but the original Nysa was shown in innumerable places, including Naxos, Euboea, Thessaly, Thrace. Thebes was the chief centre of the myths concerning Dionysus in Greece. Here his mother, Semele, one of the daughters of Cadmus, was burnt up owing to her rash prayer to see her lover Zeus in his divine glory; Zeus took her son, yet unborn, and sewed him up in his thigh, whence he issued in due time. Hence the epithets *μηροραφής*, *διμήτωρ*, *δισσότοκος*. Hermes took the child Dionysus, and gave him to the nymphs of Nysa. These nymphs, the satyrs, and the old Silenus, or the Sileni, guarded his youth, and after became his attendants. The stories of the opposition to his orgiastic worship by kings like Lycurgus of Thrace and Pentheus of Thebes, who attacked the maenads and met an evil fate at the hands of the god, probably preserve in part a tradition of official opposition to the cult. But they also contain elements borrowed from the ritual itself; such as the tale that Pentheus was thought to be a wild beast and torn to pieces. Such wild hunting, ending often in the destruction of the god or his victim, and often showing traces of human sacrifice, is almost universal as one side of the worship of Dionysus (*Ζαγρεύς*, *Ἄγριώνιος*, *Λαφύστιος*, *Ὠμηστής*), it is contrasted with the milder aspect of the god (*Μελίχιος*, *Λύσιος*). Dionysus in this connexion often appears in the form of a bull or a goat (*ταυρόμορφος*, *Μελαναιγίς*). In the Aegean islands Dionysus was worshipped not only as a god of vegetation and

7. Diony-
sus, character,

origin and
myths.

of the vine, but also as a sea god, for example in the story of the Tyrrhenian pirates whom he changed to dolphins. In Naxos his consort was Ariadne, associated with Theseus by Attic legend. His expeditions to the far east appear early; after the time of Alexander they were extended to India. One of the commonest scenes in early Art is that in which Dionysus brings Hephaestus back to Olympus. (For the Attic festivals and the drama see § 425.) At Athens every spring the marriage of Dionysus with the Basilinna, wife of the Archon Basileus, was the official recognition of a common country ceremony.

Dionysus is represented in early Art, and often later, as bearded and in rich drapery; later he is usually represented in a youthful and somewhat effeminate type. His early images were often mere masks, affixed to posts or to trees. His rout of satyrs and maenads was a favourite subject at all times, but was treated with especial skill by Scopas. His great gold and ivory statue at Athens was by Alcamenes, who made him bearded and enthroned, with a wine cup in his hand. His special attributes, beside this, are the thyrsus, the ivy-wreath, and the panther

Represent-
ation in Art.

407. **Demeter and Persephone** were worshipped together in many

temples throughout Greece as the Great Goddesses (*Μεγάλαι θεαί* or simply *τὸ θεῶ*, also *Σεμναί, Πόντιαι*); Persephone was frequently called simply *κόρη*, sometimes *Ἄγνή* or *Δέσποινα*. According to the generally accepted legend, Per-

8. Demeter
and Perse-
phone.

sephone was the daughter of Demeter by Zeus; while she was gathering flowers with her companions, she was seized by Pluto and carried off to his realm below. Her mother wandered in search of her, and was inconsolable; in her anger no corn or fruit was brought forth by the earth; at length a reconciliation was effected, on condition that the daughter should divide her time between her husband below and her mother on earth. Such is the main outline of the story, though there are many variations in its details. The scenes of its episodes were claimed by many places. According to an Arcadian version, the father of Persephone was Poseidon; Demeter was changed into a mare, and her anger was for the violence done to herself not to her daughter. Hence she was called *Ἐρινός, Μέλαινα*. Homer knows none of these stories, but refers to the union of Demeter with the mortal Iasion in a new-ploughed field. All these tales are clearly derived from primitive popular rites connected with harvest and seed-time, such as are still found throughout Europe. They were most fully developed in connexion with the Eleusinian legend as recorded in the Homeric hymn to Demeter. Mother and daughter alike are impersonations of the corn spirit. Accordingly, Demeter is represented as the giver of corn, through her favourite Triptolemus; in this connexion also she is *κουροτρόφος*. As Thesmophorus, in Attica, she appears also as the guardian of civil life, especially marriage, worshipped by matrons only at the Thesmophoria. The sacrifice of pigs, there and

at the Eleusinia, was explained from the enmity of the pig to crops. For the mysteries see § 428.

Persephone was united with **Pluto** as ruler of the realm below and of the dead. Pluto or Hades has no very distinct mythological personality, except in connexion with his consort, and most of his duties are deputed to others.

9. Hades.

408. **Poseidon** is the god of the sea and of water generally; this restriction of his functions is generally recognised (though the first part of his name means simply 'lord'); what is preserved to us of his mythological character is more than usually tinged with the poetic conception, which here seems often to coincide with the popular one. As god of the sea, Poseidon lives in his palace beneath the waves at Aegae, a mythical locality; the name suggests the Aegean; he rides over the waves in his chariot drawn by horses or sea-horses, accompanied by his consort Amphitrite, his son Triton, and the monsters of the deep. He is also the god of springs and rivers; in this character he is conceived of under the form of a bull, as river-gods often are; and he gives the moisture necessary for vegetation (*φυντάλμιος*). The sea-god is also thought of as the holder of the earth and the shaker of it in earthquakes (*γαιήροχος, έννοσίγαιος*). He is also *ἵππιος*, god of horses and of chivalry. The great centre of the worship of Poseidon in historical times was the Isthmus of Corinth, where the Isthmian games included not only athletic contests and horse and chariot races, but also races for ships. The temple at Calauria was also the centre of an early amphictyony in his honour. In Arcadia, he was the god of horses, especially in his union with the horse Demeter. At Athens his early worship is preserved in the tale of his contest with Athena for the land, when he produced the salt spring on the Acropolis, or the horse. But he became identified with Erechtheus and sank to the position of a mere *protégé* and attendant of Athena. As *ἵππιος* he still retained his position at Colonus. Sacrifices, especially of horses, were cast into the sea for him in several places. Poseidon no less than Zeus was regarded as direct ancestor by many princely families. Poseidon is usually represented in art as standing, with trident and dolphin or tunny. He frequently in later times has one foot raised on a rock or other support. In gigantomachies he usually hurls the island of Cos or Nisyros on his opponent. His train of Nereids and Tritons was a favourite subject with Scopas and later artists.

10. Poseidon.

409. It is generally admitted that the worship of **Aphrodite** in Greece has been influenced to an exceptional degree by various oriental cults; but these have been so thoroughly assimilated by Greek mythologists and poets that it is impossible to distinguish them from what is really of Hellenic or local origin. She is the goddess of love and sexual passion, alike in the highest and in the lowest form. Her worship and that of her constant attendant Eros served alike as a ratification of the ordinance of marriage, as

11. Aphrodite.

a pretext for unbridled licentiousness, and as a subject for philosophical speculation about unions and affinities; she is the giver of all grace and beauty, especially to women. She also has a connexion with the growth of vegetation which is found in oriental cults such as that of Adonis, and in the corresponding Roman goddess Venus. She was also worshipped as a goddess of the sea and giver of fair weather (*εὐπλοία*).

There are two distinct and inconsistent accounts of her birth; according to Homer and others she was the daughter of Zeus and Dione; according to Hesiod she was the product of the mutilation of Uranos by his son Cronos, and was born of the foam of the sea, whence she arose and landed at Cythera or at Paphos in Cyprus (*Κυθηρεία, Κύπρις*; the Greeks connected the name Aphrodite, rightly or wrongly, with this legend). Her worship, in its oriental form, was spread from Cyprus and Cythera, and from Eryx in Sicily; it also had a centre in Corinth. Much confusion has been caused by the varying use of the epithets Urania and Pandemos. Originally Aphrodite Pandemos was probably the Greek goddess of marriage, and Aphrodite Urania corresponded to the Syrian Astarte, queen of heaven, who was worshipped with licentious rites. But Plato and later mythologists inverted the relations of the two by associating them respectively with 'heavenly' and 'earthly' love. At Elis the symbol of Urania was the tortoise and that of Pandemos was the goat, in statues made by Pheidias and Scopas respectively. At Corinth and Sparta Aphrodite was represented as armed, and she was the legitimate consort of Ares (*ἀρεία*) at Thebes and Argos. The blending of this tradition with the other common myth regarding her as the consort of Hephaestus led to scandalous stories like that sung by Demodocus in the *Odyssey*. The identification of Aphrodite with various goddesses, mostly of oriental origin, leads to much confusion. Upis, or Nemesis, at Rhamnus was sometimes identified with her, and the statue is actually said to have been designed originally as an Aphrodite. Venus and Adonis, originally Syrian, find a counterpart in a similar pair throughout the East, Cybele and Attis in Phrygia, Aphrodite and Cinyras or Cyris in Cyprus. The 'garden of Adonis' and his festival generally take a prominent place in late Greek worship, especially at Alexandria. Aphrodite was from the earliest times recognised in statuettes of oriental workmanship; but the Greek goddess was usually draped until the fourth century; and even then Praxiteles found in the bath a pretext for her nudity, which later became normal, though the severer and more dignified aspect of the goddess was continued in works such as the Venus of Melos.

410. **Hephaestus** is the god of fire, whether elemental, as in volcanic phenomena, or applied to human use, especially for metal-work and handicraft generally. He was the son of

12. **Hephaestus.**

Zeus and Hera, and was hurled down from heaven either by his father or his mother; he fell in the sea, where he was brought up by Thetis and Eurynome, or else into Lemnos; his lameness, appropriate to the smith, is given either as the cause or the effect of this fall.

His consort is Charis in the *Iliad*, probably following the Lemnian mythology; in Hesiod, Aglaia, youngest of the Charites; in the *Odyssey*, Aphrodite. In early Attic myth he was associated with Athena in the parentage of Erichthonius; but the worship of the virgin goddess modified the legend. He was worshipped at Athens with Prometheus and Athena at the *χαλκεία* and other festivals, especially as the god of artificers, and torch races were held in his honour; in this connexion he was associated too with Daedalus, possibly originally identified with him. Lemnos was the great centre of his worship; here the Sinties, a people specially devoted to him, had received him on his fall; he had his smithy under the volcano Moschylus; Cedalion was his instructor and henchman. Every year there was an expiatory rite, when all fires had to be extinguished in the island for nine days, till fresh fire was fetched from Delos. He was also associated with Dionysus, especially in the tale of the chain with invisible fetters which he sent to his mother. Dionysus made him drunk and conducted him back to Olympus with his satyrs and maenads, the scene forming a favourite subject in art. In the west his workshop was assigned to Aetna or Lipari, and he was associated with the Cyclopes. Many mythical works of art were assigned to him, such as the necklace of Harmonia, which brought ill-luck. In Art, he is represented in the guise of a smith, with conical cap, hammer, and pincers, and with a limping gait.

411. **Ares** was the god of war and sometimes of pestilence, and has the special functions assigned to many other deities as *ἄρειος* or *ἀρεία*; he was worshipped in Thrace, but the Greeks often looked on him as a barbarian, and he had no very honoured place in their pantheon. He was consort to Aphrodite in Thebes, Athens, Argos, etc. He had a temple on the Areopagus at Athens, which was by some accounts founded in his honour by the invading amazons; according to another version, he was tried by the court of the twelve gods there for his murder of Halirrhothius, son of Poseidon, who had done violence to his daughter by Agraulus, Alcippe. His son Oenomaus at Elis was conquered by Pelops, as others of his sons elsewhere were destroyed by Heracles or other more popular heroes. He appears usually as an armed warrior, and the spear and the torch are his symbols.

412. **Hestia** has a more important position in cultus than in myth. She was sister of Zeus, and chose perpetual virginity. She is the goddess of the hearth, whether of the house or of the city, like the Roman Vesta; she receives the first and last offering at every feast. Her symbol is the hearth, *ἑστία*, in the house, and the *κοινὴ ἑστία* in the Prytaneum. She is often associated with Hermes, typifying the life of the family within, as he its communication with outside. At a sacrifice to Hestia, nothing might be taken or given away. In Art she is seated or stands in rich drapery, usually veiled, and often leads the procession of the gods.

Minor and attendant deities.

413. Of minor deities not even an enumeration can be attempted here, but an indication may be given of the classes into which they fall.

First we may mention the attendants and messengers of the gods, such as Iris, Nike, goddess of Victory, Hebe, Ganymede, Eileithyia, the Graces, the Horae, etc. Some are cup-bearers or attendants, others either communicate directly the will of the gods to men, or are mere personifications of the favours and functions of the deities they accompany.

Next come the nymphs, satyrs, and sileni, whom we have already met as the attendants of Dionysus and other gods. **Pan** 2. Of earth. was an Arcadian god, the son of Hermes and protector of flocks; he was essentially the god of the country, but was introduced into Athens, where he was worshipped in a cave under the Acropolis, because he was supposed to have helped the Athenians at Marathon by casting 'panic' terror into the Persian ranks. He invented the pan-pipes, or syrinx, which was personified as a nymph; Echo also, as well as other nymphs, were his companions. He appears in Art either as a youthful shepherd, with *λαγωβόλον* and syrinx, or in the more familiar form with goat-legs and goatish face and horns. **Priapus** was especially the god of vegetation and gardens, and his image symbolised in the coarsest manner the reproductive energy in nature. The centaurs, who in origin offer many analogies to the satyrs, are also country creatures; most of them are typical of wild and unbridled savagery; a few, such as Cheiron, are the trainers of heroes, skilled in medicine and country lore.

Beside the recognised dynasty of Poseidon, his consort Amphitrite, and his attendants, we find many other deities of the 3. Of water. water. Oceanus, and his consort Tethys, is little more than an abstraction. Nereus is the father of fifty daughters, the Nereids, among whom Amphitrite and Thetis are the most conspicuous. Leucothea and her son Melicertes were identified with Ino the daughter of Cadmus and her son Palaemon. Proteus, more than any other, is typical of the power of sea-creatures to transform themselves into various shapes. Glaucus is another demigod of popular myth. Triton, sometimes the son of Poseidon, is also the 'old man of the sea,' with whom Heracles wrestles. All these and many others are merely variations on the same conceptions. Every river has its own god; but Achelous is the chief of all. Helios plays a part, usually a subordinate one, in several myths; he was especially worshipped at Rhodes; he has rarely a clear mythological character apart from Apollo; a similar statement may be made as to Selene, especially in purely Greek myth. Eos, in her pursuit of Cephalus, and her union with Tithonus, seems to have a clearer personality. The stars, the winds, and other phenomena are also personified; and Aeolus, father of the winds, is familiar to us from Homer.

4. Meteorological personifications.

Some ethical personifications, such as Themis and Nemesis, have a distinct cultus and are sometimes identified with other deities; we also find temples to the Erinyes, or Furies, who are more than a mere allegory. Death, Sleep, the Fates, Fortune were all represented in Art, and even a conception like *Aιδώς* or **Ελεος* had an altar. Eirene and her child Plutus are a transparent allegory, as are many others that could be mentioned. The fortune of cities was a favourite form of personification in Hellenistic times, as in the well-known statue called 'Antioch.'

5. Ethical personifications.

Many foreign deities have already been spoken of as identified with recognised Greek deities; others who retain a separate individuality are Rhea Cybele, the Phrygian mother of the gods, the Cabiri, the Egyptian Isis, Serapis, and others, and Mithras and other oriental deities in later times.

6. Foreign deities.

414. The worship of the dead, and the offerings made at the tomb, formed a prominent feature of Greek ritual. Some demi-gods or heroes were represented as of mortal origin, especially those connected with healing, such as **Asclepius**, whose position is intermediate between gods and heroes; some others, such as **Amphiaraus**, who had oracles where they were consulted, had been seers in life. Even the **Dioscuri** and **Heracles** were regarded as men who were deified, though Heracles only was admitted to Olympus. But practically any man, when he died, might be said to become a hero, though the word was not so generally applied until comparatively late times. Conspicuous examples are offered by the oecists of the various colonies, and the heroic honours given them.

Heroes.

V. 2. RELIGIOUS INSTITUTIONS.

415. THE various stages in the growth of belief and of ritual which have been noticed in the general introduction to this section have left their traces throughout Greek religious institutions. It is however impossible, in the present state of our knowledge, to treat the subject in a strictly historical manner, though in some cases it may be possible, within certain limits, to distinguish the more primitive rites from their later modifications. We must also remember that there are many intermediate steps between popular tradition and custom on the one hand, and the official and recognised ritual of great centres of worship on the other; and that what is preserved to us, especially in the former case, depends often on doubtful or indirect evidence, or on fortuitous and often isolated records.

Introduction; various stages in ritual.

For convenience in systematic treatment, we may classify the subject according to the following table, which must not be regarded as scientifically complete or accurate, since some cross divisions are possible.

Classification of the subject.

Ritual	A. Ordinary	1. Persons	
		2. Places	
		3. Manner	
		4. Times	
	B. Extraordinary	a. in celebration (Festivals)	1. Athletic
			2. Musical
			3. Dramatic
		b. in manifestation	1. Oracles
			2. Healing
			3. Mysteries.

416. In the ordinary ritual of daily life no priest was necessary as an intermediary between men and gods. Alike in the time of Homer and Hesiod and in historical Greece, everyone could make sacrifice and prayer for himself on ordinary occasions. Such functions naturally belonged to the head of the family, and were performed at the hearth; similarly, when they were performed on behalf of the State at the common hearth of the city, they devolved upon the head of the State—the king in early times; under republican institutions they either belonged to the chief political magistrate, or to another officer, sometimes given the special title of ‘king,’ who was the head of the State for this purpose, but held none the less an essentially political office, and was eligible under the same conditions as a civil magistrate.

Thus Aristotle *Pol.* VII. (VI.) 8 refers to the officers who perform *θυσίας τὰς κοινὰς πάσας, ὅσας μὴ τοῖς ἱερεῦσιν ἀποδίδωσιν ὁ νόμος, ἀλλ’ ἀπὸ τῆς κοινῆς ἐστίας ἔχουσι τὴν τιμὴν*, and says they are variously called *ἄρχοντες, βασιλεῖς, or πρυτάνεις*. The right to share in such common State sacrifices was a privilege exclusively belonging to citizens, and aliens were excluded from them. On the other hand there were many religious ceremonies, whether for the State or for individuals, which required certain skill or knowledge beyond those of the ordinary

laymen, and which therefore had to be performed by a special priest; and others which only the members of a certain family, or persons possessing peculiar qualifications, were privileged to perform. This was particularly the case with oracles, mysteries, etc. (§§ 426, 428); but also with more ordinary public priesthoods; for example, the chief priestess of Athena and the high priest of Erechtheus at Athens were always from the sacred family of the

Eteobutadae. In many instances also a family or clan kept up a special worship, in which other citizens did not participate, but which nevertheless was recognised as part of the official religion of the State; such were the rites of the Clytidae at

Cos. In later times associations for religious purposes became very common (*θιασοί, ἔρανοι*); they admitted all classes to membership, including women and slaves; sometimes they were devoted to the worship of a recognised deity of the State; more

A. Ordinary ritual.
1. Persons employed in worship.
Head of family or State.

Priests.

Family cults.

Religious associations.

often to the celebration of foreign rites, frequently of an orgiastic character.

Though there was no distinct priestly caste in Greece in early times, priesthoods were often hereditary; some remained so; others, in common with other political offices, came to be elective or decided by lot. In later times they were very commonly sold. The perquisites of the priest of a frequented shrine were fixed by law or custom; he often had, for example, a certain prescribed share of all victims, including the skin. A considerable revenue resulted from the sale of these proceeds of sacrifice, which in some cases went to the State; the custom of selling priesthoods was virtually a part of the system of farming taxes and revenues. Often too, in more private cases, the founder of a shrine retained certain privileges, often as priest, in dedicating it to a god for public use. But the State always kept a control over such dedications, and at Athens and elsewhere it was illegal to introduce the worship of any foreign divinity without the express sanction of the people.

Appoint-
ments and
privileges of
priests.

417. Although a sacrifice or other religious service might be offered anywhere, it is obvious that in all stages of religious belief certain places would be regarded as either more pleasing to the gods or more likely to attract their attention. The two main causes which led to the selection of such places were physical and social; to these may be added, though much less frequent, historical.

2. Places of
worship.

Physical conditions would vary with the stage of belief; thus in a primitive stage, conspicuous trees or springs or other natural objects would be regarded as the abode of a special deity, if not as his embodiment, a notion which survived to later times in the local shrines of Pan and the nymphs throughout the country; it was an advance towards generalisation when Poseidon or other marine deities were invoked by the sea-shore, or even at a river; sacrifices to Poseidon continued to be thrown into the sea in many places. When heaven was regarded as the abode of the gods, it was natural to get as near to them as possible in high places, such as the tops of mountains; many gods were so worshipped as *ἵπτατος*, *ἄκρατος*, etc. Extraordinary phenomena also naturally evoked worship; thus Hephaestus was specially worshipped in volcanic Lemnos.

Physical
reasons for
sanctity.

Among social conditions the first and most universally prevalent was the necessity for a recognised centre for the worship of the family and of the State. Every house had its hearth (*ἑστία*) in its midst, the seat of the *ἑφέστιοι* or *μύχιοι θεοί*, and also its altar of Zeus *Ἐρκείος*, the protector of its enclosure, in its fore-court. When the king was, for religious purposes, the head of the State, it was natural for the hearth of his palace to be the centre of worship for the State. Thus the house of Erechtheus at Athens was identical, according to Homer, with the earliest temple of Athena. Usually in later times the common hearth of the town had a separate existence, in

Social
reasons for
sanctity.

connexion with the Prytaneum, the centre of State hospitality in the Agora; often this hearth was represented by a tholos of round shape, recalling the hearth of an early house; of such a nature was the temple of Vesta (*Ἑστία*) at Rome. The temples of the gods of the agora, the *ἀγοραῖοι θεοὶ* who presided over the political and commercial activity of the State, were naturally in the most crowded parts of the city, near the centre of civic life. Other temples were usually placed in conspicuous positions in the town, sometimes on sites hallowed by old associations, and perhaps originally consecrated from physical causes, though it was the growth of the town that occasioned their importance. Socrates indicates the ideal arrangement of historical times when he says (*Xen. Mem.* III. 8. 10) *ναοὶς γε μὴν καὶ βωμοῖς χώραν ἔφη εἶναι προπωδεστάτην, ἣτις ἐμφανεστάτη οὖσα ἀστιβεστάτη εἶη· ἠδὺ μὲν γὰρ ἰδόντας προσεύξασθαι, ἠδὺ δὲ ἀγνώως ἔχοντας προσίεσθαι.* Such conditions were perfectly fulfilled by the temples on the Acropolis of Athens, which, while visible from every part of the city, could only be approached by a devious ascent.

Historical conditions also in some instances determined the site of a dedication; the commonest examples were the tombs of heroes and the trophies set up on fields of battle; but it was usual for the memorials of great victories to be set up not on the spot where the event had occurred, but within the precinct of some deity to whom the glory was ascribed; thus, although trophies were set up at Marathon, Salamis, and Plataea, the real memorials of the defeat of the Persians were to be found at Athens, Olympia, and Delphi.

In a place set apart for the worship of the gods (*ἱερόν*), the essential thing was an altar (*βωμός*, *ἑσχάρα*) for sacrifice, and an enclosure or precinct (*τέμενος*); to these might be added a temple (*ναός*), which was regarded as the abode of the god, and contained his image or symbol. The temple was in no case regarded as a place of assembly for worshippers; they met in the temenos outside; most sacrifices too were offered at the altar which stood outside the temple, usually in front of it, though a small altar, mostly for incense or symbolical offerings, might be placed inside it. In course of time other buildings came to be added. A temple could possess property, consisting of dedicated objects, of slaves, of money in specie, of money invested, and of real property; this was administered and audited by officials appointed by the State, and we possess numerous inscriptions recording such administration, or giving inventories of the possessions of the god. From temple funds came the money expended on keeping up sacred buildings, on performing the regular sacrifices and other acts of public worship, and on the salaries of officials. A special privilege possessed by some temples was that of asylum, which often extended to a considerable distance around, as at Ephesus; this privilege was especially used by slaves to escape from the cruelty of their

Historical reasons for sanctity.

Sacred places and buildings, precincts, altars, temples.

Property of temples.

Right of asylum.

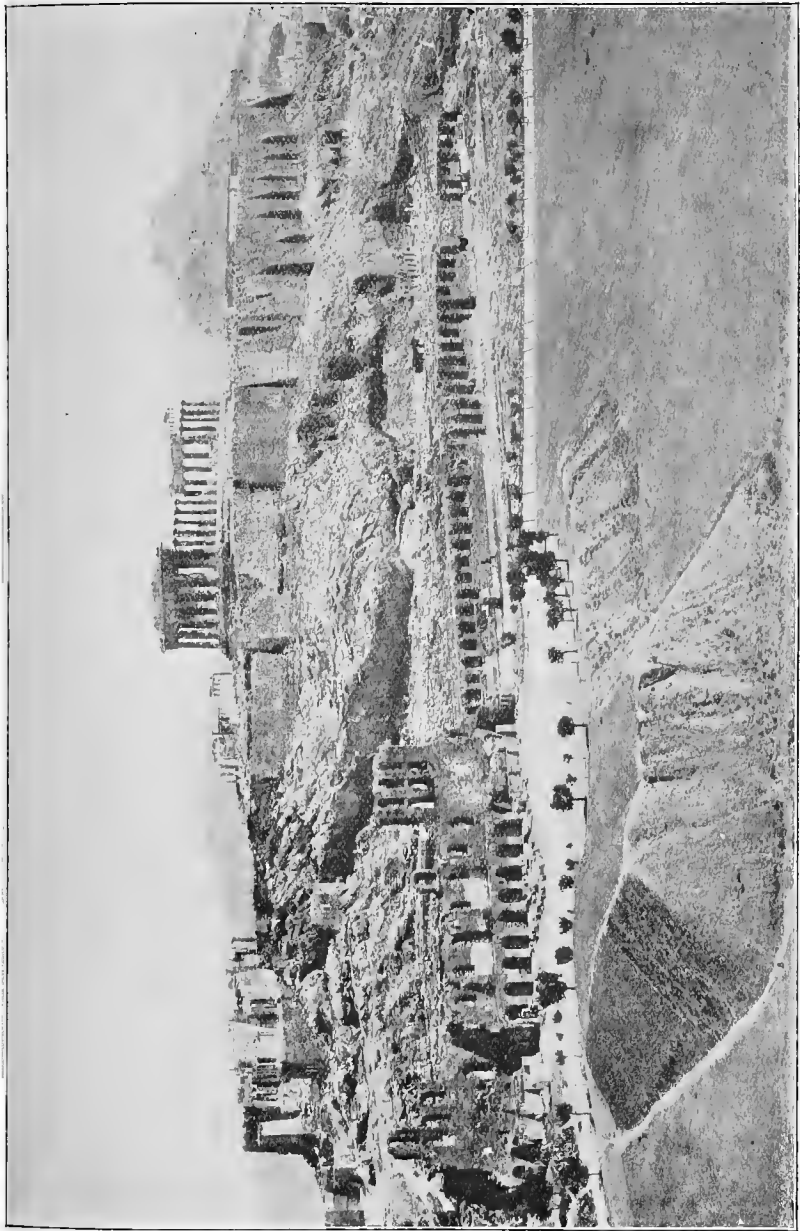


Fig. 89. The Acropolis at Athens, from the S.W.

masters. Some temples were in particular repute for political offenders; for example, the temple of Athena Alea at Tegea.

418. Sacrifice, actual or symbolical, was the central and essential point of all acts of worship in Greece; prayers and hymns, curses, oaths, and purifications are all inseparable from it. We may divide sacrifice into three kinds, tributary, piacular, and mystic, though it is often impossible to draw a rigid line between them, and their signification is often confused in historic times.

Tributary sacrifice is natural as soon as worship is differentiated from sorcery, and the gods are regarded as higher powers, and on friendly terms with mankind; the tribal or national god is honoured with gifts just like an earthly king. At first sacrifice is regarded as a contribution to his actual needs; he consumes the offering, or, if it is burnt, he at least imbibes its savour; and even in a more advanced stage of thought, the notion of a pleasing service is never lost. All kinds of human food may thus be offered, whether bloodless, fruits, milk, honey, wine, etc., or the flesh of animals.

Piacular sacrifice is due to the notion that if an offence is committed the god requires a life in atonement; if the criminal himself cannot be slain, then the whole people is under a curse till a substitute is found. This is not only the case with special and discovered offences, but with such constantly recurring offences or pollutions as are unavoidable, and must be atoned for by a periodical sacrifice. A survival from a primitive belief in malignant powers, which must be propitiated in order that they might leave the worshipper alone, also led to similar rites. In such cases the victim was not eaten in a sacrificial banquet by the worshippers, but was completely consumed, thrown into a sacrificial pit, or cast out, sometimes into the sea; or, in some cases, consumed by the priests only.

Mystic sacrifice is not intended to please the god or to avert his anger, but to have a certain magic effect upon his personality; thus it belongs to the earliest stage of religious belief, and its original meaning is often lost or obscured in historical times.

Its motive lies in the belief that the god is incarnate in some person or animal, upon whose physical vigour his activity depends; it is therefore necessary that this person or animal should not be suffered to decline gradually with age, but should be slain while in full vigour, so that his powers may be transmitted unimpaired to his successor. This notion is especially prevalent in connexion with spring or harvest festivals throughout Europe, and distinct traces of it can be found in Greece; the god who is also victim is regarded as embodying or typifying the spirit of vegetation and natural reproduction. The chief characteristics of this kind of sacrifice are mourning, often succeeded by rejoicing, on the part of the people, blood-guiltiness on the part of the sacrificer, a pretended resurrection or re-incarnation of the god, and a solemn sacramental banquet in which his flesh is eaten by his votaries; or, if the sacrifice is regarded as an atoning

one, his blood is sprinkled over them. Sacrificial rites have been explained by some modern mythologists upon totemistic principles; but as it is not yet proved that the Greeks or any Aryan people ever had totemism, it is safer to avoid such explanations. The victims or offerings proper to different gods varied from place to place; as a general rule we may expect the offering of like to like; for instance a female victim to a female deity, a black sheep to chthonic deities, etc.; but no universal rules can be made. The local ritual and offerings were usually prescribed in detail in each shrine, and are often recorded in inscriptions.

Totemism
doubtful for
Greece.

Appropriate
offerings.

The proceedings at the actual sacrifice were usually the same. First came the preparations; garlands were worn by priests and by the victim, whose horns were often gilded. Then it was led to the altar; if it struggled, the omen was bad; if it bowed or shook its head, the omen was good. Next a bowl of water was sanctified by plunging in it a torch from the altar, and all present were purified with it (*χέρινα νέμειν*), and the altar sprinkled. In the sacred silence which followed (*εὐφημία*) came the prayers. Then came the sprinkling, on and around the victim, of the *ὀλοχύται* (grains of barley) brought in a flat basket (*κανόν*), which was therefore among the essential implements of sacrifice. After this began the sacrifice itself; first some hair was cut from the victim and thrown in the fire (*κατάρξασθαι*); then it was stunned with an axe or club; its throat was cut, and the blood caught in a vessel, the head being turned down for Chthonian gods, upwards for others; the blood was poured on the altar, or sprinkled over the worshippers if the rite was piacular. During these proceedings was kept up an *ὀλολυγμός*, or, in later times, flute-playing. Then the victim was skinned and cut up; the entrails were inspected for the purpose of divination (§ 426), and the portions set apart for the god were burnt on the altar. Usually they were the thigh-bones and fat, and portions of each joint, and the tail. The rest was cooked on spits, and divided among those present.

Ritual of
sacrifice.

Prayer, as an accompaniment of regular sacrifice, usually followed a set formula known to the priest; or of course any special petition might be introduced, especially if the sacrifice were made for the purpose. When separate from sacrifice, prayer often referred to past offerings, or was connected with a vow promising future sacrifice. The Greek worshipper prayed standing, with his hands raised, palm upwards, to heaven; if he addressed the gods below, he might stretch his arms downward, stamp on the ground to call their attention, or kneel to touch the ground with his hand; but kneeling in prayer, except with this motive, was regarded as barbarian and unworthy of a free man. Kissing the hand to the god (*προσκυνέειν*) was not unusual. Prayer was usually made aloud (*εὐχέσθαι*) unless there was some special reason for concealment. **Curses** (*ἀραί*), which are clearly only a form of prayer, are especially addressed to the gods below; they,

Prayer.

Curses.

more often than other prayers, were written and attached to an image, dedicated in a shrine, or buried; they were used as a means of private revenge or a protection against injury, and were especially inscribed on tombs. Oaths owe their force to the curse implied or expressed in case of their violation, and so are regularly made

Oaths. over sacrifice (*καθ' ἱερῶν τελεῶν, ἐπὶ τομίῳν ὀμνύναι, ὄρκια τέμνειν, etc.*), the person swearing touching the victim, the altar, or the symbol of the god; they were the regular confirmation of treaties and of all responsible political offices. Zeus ὄρκιος was the special president over such oaths; but every State had its prescribed list of deities whose names made an oath especially binding; and certain shrines were regarded as giving a peculiarly inviolable sanction to an oath.

419. Religious observances and ceremonies entered into almost every act of the daily life of a pious Greek. We have already

4. Times of worship.

seen that no meal was eaten without offering some portion of meat and drink to the gods—a custom equivalent to the modern practice of saying grace before and after meat. A special sacrifice would be held in a private house on festival days. Sacrifice and prayer were also necessary at the beginning of any important enterprise, and on the occasion of any of the chief events in the course of life. Thus birth, marriage, death, each was accompanied by its peculiar rites (see §§ 632 ff.); and sacrifices were held at the opening of any public function, such as an assembly, council, or law-court (*εἰσιτήρια*).

420. If we include all festivals, small as well as great, we shall find that they make up a considerable proportion of the year; and

B. Extra-ordinary ritual.
(a) Festivals.

most of them were probably kept as holidays; they appear to have occupied about 70 days in the year at Athens. The Greeks regarded these holidays much as we regard our days of rest; thus Plato (*Laws* II. p. 653 D) says that 'the gods, pitying the laborious nature of men, ordained for them, as a rest from their labours, the succession of religious festivals.' The proportion of holidays to working days was not very different from what it is with us; but their irregular intervals and grouping together round the great festivals must have caused them to interfere more with the routine of daily life.

Beside the division of festivals already indicated (§ 415) we may also classify them as civic, confederate, and national. Of

Civic festivals.

civic festivals we may get a notion from our comparatively complete knowledge of the Attic calendar. The majority of these were probably in some degree common to all Greeks, especially spring and harvest celebrations, and others which depended on the course of nature, though varying in their official recognition and their dedication to a particular deity. They did not however coincide in time at various places, chiefly owing to the erratic nature of the Greek calendar, which usually adopted some device, such as three intercalary months in an eight-year cycle, to reconcile the solar year with the period of twelve lunar months, and consequently often varied considerably in its

relation to the seasons (see § 630). Such devices varied from place to place in their application, and so the correspondence of the local months and their festivals varied also. Certain days of the months were observed, varying locally; thus at Athens it appears that the third and seventh days were sacred to Athena and Apollo respectively.

The Panathenaic games, which were celebrated with especial magnificence every four years, and were, if not in religious significance, in pomp and fame, the greatest of all Athenian festivals, were essentially of a civic character. The Great Panathenaea, celebrated in the third year of each Olympiad, occupied six to nine days. The great procession and sacrifice, and the offering of the peplos, took place on the 28th of Hecatombaeon (*τρίτη φθίνουτος*). It was preceded by games which included not only musical and athletic contests, but also warlike exercises, and competition in *εὐανδρία*, between the tribes. There was also a torch-race, and boat races at the Peiraeus on the last day. The prizes accorded to competitors consisted of jars of the oil of the sacred olives, varying in number from 140 to one; ornamental vases, with a figure of Athena on one side and a representation of the special contest on the other, were also given.

The Panathenaic games.

421. Confederate festivals were common in early Greece; a group of states, either connected in race or neighbours in position, joined in a common worship of some divinity, usually at a centre which had no independent political existence; well-known examples of such amphictyonies, as they were called, were those which united in the worship of Apollo at Delos, and of Poseidon at Calauria, and the greatest of all, which met at Anthela near Thermopylae in honour of Apollo, and was afterwards transferred to Delphi. The description of the Delian festival in the Homeric hymn gives the best notion of such an assembly in early times, telling how the long-robed Ionians gathered themselves together, with their children and their wives, to celebrate in honour of Apollo contests in boxing and dancing and song. As national festivals there were four canonically recognised in Greece, the Olympian, the Pythian, the Isthmian, and the Nemean. It is very difficult to understand how these four, and no others, came to be selected for such special honour.

Confederate festivals.

National festivals; the four great games.

The Pythia originated in the meetings of the Delphic amphictyony, and the famous oracle of Delphi doubtless led to their universal recognition. Olympia had a primitive shrine and oracle, and came early to be recognised as the chief centre of the worship of the Olympian Zeus in Greece. The Isthmia and Nemea probably owe their celebrity to the early importance of Corinth and Argos, which respectively presided over them. The recognition of all these four games as national or Hellenic cannot be traced back beyond the sixth century; the Olympian indeed claim an uninterrupted celebration from 776 B.C., as well as an earlier mythical origin; but the name Hellanodicae, and the recognition

of Hellenic sanction which it implies, are probably not earlier than the seventh century; and the historical foundation of the Pythian dates only from 586 B.C., of the Isthmian from 582 B.C., and of the Nemean from 573 B.C. It seems likely that their recognition as a bond of union among all of Hellenic blood was not so much of spontaneous growth as due to the encouragement of far-seeing politicians, especially the enlightened tyrants of Argos, Corinth, Athens, and other cities. There is no doubt that both by the close relation of athletic to military prowess, and by the feeling of Hellenic unity which they fostered, they contributed very materially to the result of the great struggle between Greeks and barbarians at the beginning of the fifth century.

422. These great games, though differing as to various details in the nature and manner of their contests, were in the main conducted upon the same principles; it will therefore suffice here to describe in more detail one of them only, the Olympian. The Olympic tradition, which attributed a mythical origin to the games, and regarded any innovation as a revival of a forgotten practice of primitive times, claimed continuous celebration from 776 B.C. for the stadium alone, and stated that all the other contests had been added to it by degrees. The judges, who were called *Hellanodicae*,

were at first two in number; in later times the normal number seems to have been ten. The administration of the games originally belonged to Pisa, but was transferred to Elis in historical times. Most of the events for open athletic competition are said to have been instituted by the beginning of the seventh century, except the *pancratium*, which was not introduced till 648 B.C. Towards the end of the same century were instituted the various competitions for boys. The *hoplite* race was not added till 520 B.C., and then probably with a distinct military purpose. Four-horse chariot races were introduced in the 25th Olympiad (680 B.C.), and ridden horses in 648 B.C. Various other experiments, such as mule chariots, were introduced and dropped again in the fifth century. Colts ran after 384 B.C. A contest of trumpeters and heralds was introduced in the 96th Ol. (396 B.C.).

The Olympian festival was held every fourth year; the sacred month, in which it was celebrated, was alternately the second or the third after the summer solstice, a season when the extreme heat must have been trying both to competitors and to spectators. The games themselves took place in the middle of the month, so that the sacred truce (*ἐκεχειρία*) would last a fortnight before and after them, and enable visitors to travel in safety to Olympia and home again. Its beginning was proclaimed throughout Greece by the *σπονδοφόροι*, heralds sent out from Elis. An immense concourse gathered together from all Greek towns and colonies; the festival was not only religious and athletic, but afforded a fair for commerce, and an opportunity for emulation in display among the *θεωρίαι* or sacred embassies sent to

Athletic
festivals;
Olympia; in-
stitution of
games.

Order of
celebration.

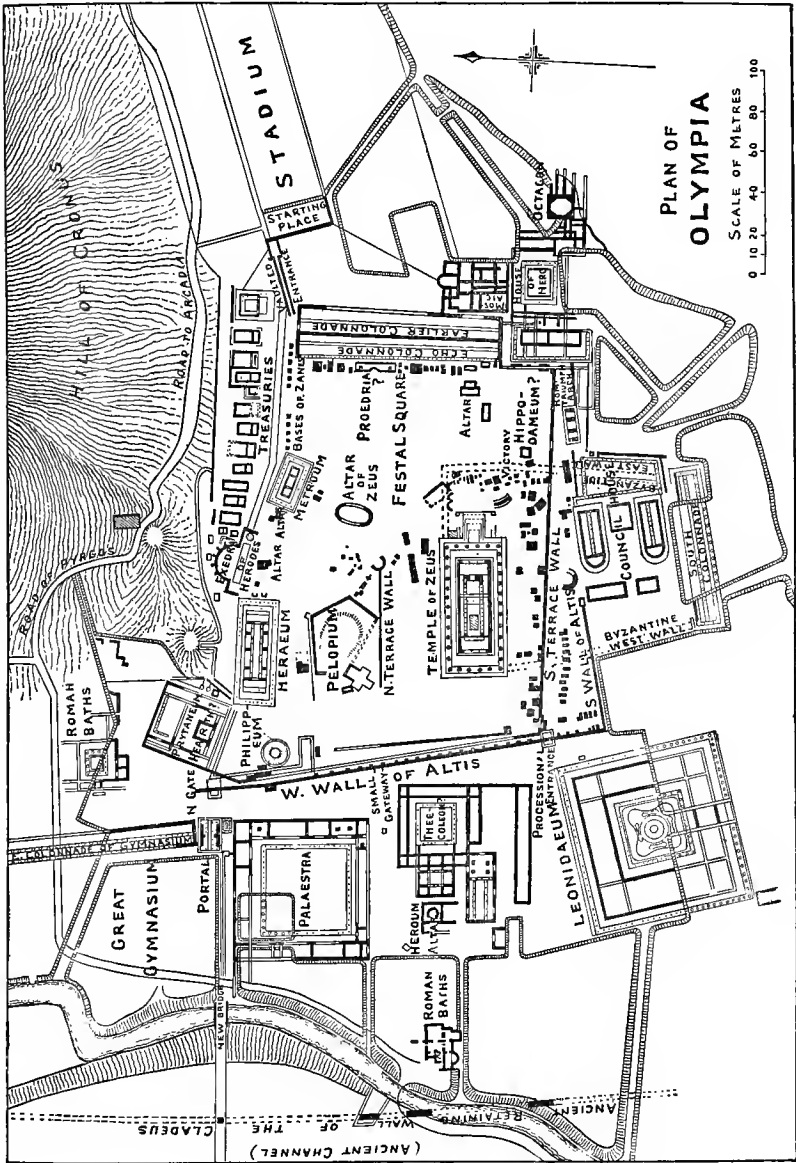


Fig. 90.

represent the various states, as well as among individuals. It gave an opportunity for the publication to as wide an audience as possible of literary productions, such as the history of Herodotus, which is said to have been read there; and also of addressing the assembled Greeks upon some topic of vital interest, as in the Panegyric orations of Lysias and Isocrates. The sacred precinct of Zeus at Olympia was situated on a piece of level ground at the junction of the Cladeus with the Alpheus; it was called the Altis; since the excavation of 1876-81, its plan is completely known to us. It was surrounded by a wall with several entrances; in the southern part of it stood the great temple of Zeus, containing the gold and ivory statue of the god by Pheidias, and ornamented by the sculptures now in the Olympian museum. N. of the temple was the Pelopium, or grave of Pelops. N. of this again, just at the foot of the hill of Cronos which overhung the Altis, was the Heraeum, the most ancient of the temples that still partly survive. Near the Pelopium was the great altar of Zeus, made of the ashes of victims. Further east, on a terrace cut out of the hill, was a row of treasuries, built to testify to the glory of the various cities which dedicated them, and to hold the offerings which they made to the god. In front of them stood the Zanes, a set of statues made from fines inflicted on athletes for violation of the rules. In addition to other buildings, the whole space was filled with altars, dedications, and statues, mostly of victors, of which many of the bases still remain, and the enumeration of which occupies the best part of two books of Pausanias. At the N.E. corner of the Altis was an arched passage leading into the stadium, where the starting-place and goal of the athletes may still be seen. S. of the stadium was the hippodrome, where the chariot races took place, and all around the Altis were grouped the houses for priests and officials, and for the entertainment of official or distinguished guests, porticoes to house the crowd of ordinary pilgrims, a gymnasium for the competitors, and the prytaneum, bouleuterium, and other public buildings connected with the games. Women were not admitted to the great festival of Zeus, but had a separate one of their own in honour of Hera; a peplos was offered to the goddess, and games were held in which the competitors were girls.

A victory at the Olympian games was the highest honour which a Greek athlete could desire, and formed the culmination of all his training. Every competitor was obliged to prove that he was of Hellenic parentage, that he suffered under no political or moral disqualification, and that he had undergone ten months training; in later times he had also to train for a month in the gymnasium at Elis, under the eyes of the Hellanodicae. When he formally entered as a competitor, he and his relatives had to take a solemn oath over the sacrifice of a boar-pig at the altar of Zeus ἄρκιου in the bouleuterium at Olympia that he had complied with the conditions, and would keep the rules of the contest. After this he was not allowed to

The Altis at
Olympia.

Qualifica-
tions, re-
wards and
competitors.

withdraw, and any unfair proceeding or breach of the rules was punished by a fine. No official prize was given to the victors, except a crown of wild olive (*κότινος*) and a palm-branch and the right to erect a statue in the Altis.

The absence of any prizes of intrinsic value distinguished the four great national games as *στεφανίται* from others, like the Panathenaea; at Delphi the crown or garland (*στέφανος*) was of bay, at the Isthmus of pine, or earlier of parsley; and at Nemea also of parsley. But the victor's friends and his city added to these honours many others, some of a more substantial nature; they celebrated his victory both at Olympia and on his return home with festal procession and song; it was for such occasions as these that Pindar wrote the odes that have proved 'a monument more lasting than bronze.' At Athens, the victor was awarded, by the law of Solon, a sum of 500 drachmas and food in the prytaneum for the rest of his life; everywhere he had the place of honour in war and peace; and, at Sparta, the right to a place in battle near the king. Such honours testify to the belief in early times that a victorious athlete was not only a man specially favoured by the god in whose service he had distinguished himself, but that his physical prowess proved his qualification for the highest services to his country, and was a sign of the most perfect manhood. But, about the end of the fifth century, a change came about for the worse.

It was found that the healthy and abstemious diet and all-round development which had so far distinguished the Greek athlete could not hold their own, in actual contest, against a heavy meat diet and a special training; and from that time athletes tended more and more to become a special class, with muscles developed at the expense of their brains. Still, the honour given to victors was by no means omitted in later times, and the greatest ambition of an athlete, to be a victor at all the four games (*περιοδικής*), always remained a distinction which was held in the highest honour.

Decline of
athletic
honours.

The programme of the Olympian games is said to have been got through in a single day in the earlier period; in later times it was spread over five days. The stadium was the first event to be decided, and its victor gave his name to the Olympiad. The Olympic stadium can be exactly measured, as the starting and finishing line are both preserved; the length of the course is just over 210 yards; there is of course a free space beyond at each end. It follows that the *δίαυλος* was very nearly equivalent to the quarter-mile; the exact length of the *δόλιχος* is not known for certain; probably it was between two and three miles. At the starting-point a line of stone slabs was let into the ground, which contained sockets for posts, to mark off the space assigned to each runner, and also two shallow grooves adapted for him to get his toes into for the start; as these

Programme
of games.

The sta-
dium; run-
ning.

two grooves are only about six inches apart, it seems clear that the Greek runner must have started with his feet close together, a position which

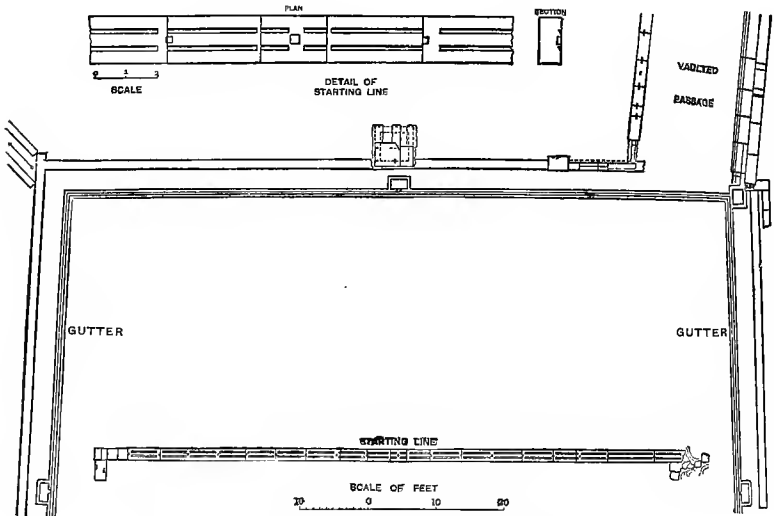


Fig. 91. Starting-place in Stadium at Olympia.

must have been prescribed in order to secure a fair start. The posts must either have served to stretch the lines along the course to divide the tracks assigned to the various competitors or else to act as guides to the runners in the broad course. No arrangement for a curved turn was found, so that it seems probable that in the *δίαυλος* the athlete had to turn sharply and come back after turning the post assigned to him. In the long race a different arrangement may have been made. In the hoplite race each competitor carried a shield, and it is clear from vases that the skill of the runner consisted in swinging this so as to aid his start and turn. In earlier times this contest may have been a race in full armour, and training in it may explain the Athenian charge at Marathon. It was a *δίαυλος*.

The pentathlon, or contest of five events (*ἄλμα, ποδωκείην, δίσκον, ἄκοντα, πάλην*), consisted of contests in the long-jump, throwing the disc, throwing the javelin, running and wrestling; the first three of these appeared only in the pentathlon, while the last two existed also as separate contests. The way in which the victory in these five events taken together was decided is not recorded. In the *ἄλμα*, or long jump, weights like dumb-bells (*ἀλτήρες*) were held in the hands; from the pictures on vases, the jump appears to have been preceded by a few steps; the swing of the weights was used, as now sometimes, to assist the spring, the arms being thrown

The pentathlon.

Jumping.

forward as the jumper took off, and swung far back before he alighted. A 'garden' (σκάμμα; τὰ ἐσκαμμένα is probably identical, not, as L. and S. say, to be distinguished) or piece of dug earth was prepared to show the marks of the jump and to break the jar of alighting. The use of weights is known by modern practice to increase considerably the distance that can be covered; but it is quite inadequate to explain a record such as that of Phayllus, whose jump of 55 feet rests on no good authority. As to the method of throwing the disc we are well informed by vase-paintings and statues, especially the copies of Myron's famous discobolus; the competitor took his stand with the right foot slightly in advance and the disc in his left hand; then he transferred it to his right, swung it back as far as possible, and discharged it by an underhand throw, bringing all the weight of the body into play, at the same time bringing the left foot forward so that his weight rested on it at the moment of throwing. The throwing of the javelin, which was thrown either by the hand alone or by the help of a thong wound round the shaft and held in the fingers so as to impart a revolving motion to the throw, was apparently at Olympia for distance only; elsewhere throwing at a mark was also practised.

Throwing
the disc.

Throwing
the javelin.

In Greek wrestling three throws were necessary for a victory (τριαγμός). It took place on prepared ground, to give foot-hold and break falls (σκάμμα). The competitors were free to get their grip as they could, and much of their skill was devoted to this object.

Wrestling.

Boxing, in earlier times, was not considered unworthy of gods and heroes, and was practised by men of high rank; the *ἱμάντες* *μειλίχαι* then used consisted merely of thongs of leather wound round and round the fists, as constantly represented on vases. These were totally different from the brutal instrument made of solid leather which was used in later times (*ἱμᾶς ὄξύς, μύρμηξ*, Lat. *cestus*) when professional boxers were a special class. The pancratium was a contest in which fighting of any sort was allowed; this and boxing went on until one of the competitors acknowledged himself as beaten. These contests were all, probably, held in the stadium; in the hippodrome the chariot and horse races took place.

Boxing.

Chariot races.

423. Musical festivals were not usually held separate from athletic festivals, but formed a part of them. At Olympia, indeed, the musical contests either did not exist at all or took a very subordinate position; but in the Panathenaea, at Delphi, and elsewhere, they formed a prominent part of the games. There were usually four principal kinds of contest in what we should call music; lyre playing, flute playing, and singing to the accompaniment of the lyre or flute (*κιθαρισταί, ἀλληγαί, κιθαρφοδοί, ἀλωδοί*); to these may be added competitions between *ῥαψωδοί*, men who recited the Homeric poems. At Delphi singing

Musical
festivals.

to a flute was early abolished, as being too wild and melancholy in character. The great feature of the Delphian musical festival was the Pythian strain (Πυθικός νόμος), which was what we should call a piece of programme music, representing in five movements the fight of Apollo and the Python, the death of the monster, and the triumph of the god. It is evident that here narrow limits were laid down within which the art of the composer and the executant (who were apparently the same) must be confined. Closely allied to these musical contests were those in choric singing and dancing, for both men and boys, which formed part of many festivals; these continued to exist in many places, side by side with the more elaborate form which had been developed from them, the drama. Of choric singing without dancing we have no record; but dancing without singing was common, as well as the combination of the two.

424¹. **Dramatic Festivals.**—The most conspicuous development

Dramatic
festivals.
Origin of
drama.

of the drama in Greece was in connexion with the worship of Dionysus; but δράματα, or ritual actions, which occurred in the cult of other gods, were more or less dramatic in character; for example, in the Eleusinian mysteries. Similar customs occur in many places as a part of the magic rites associated with the year spirit, with the death and revival of vegetation, or with human activities at seed-time, harvest, vintage, or other seasons; these survive in the performances of mummers or their equivalent in many parts of Europe, notably in Thrace. Wherever such rites came to be regarded as the dramatic repetition of a myth, it was natural that they should develop into drama, and that they should be used to commemorate other myths than those originally associated with them. It was not uncommon for the participants in these rites to masquerade as animals. It is an obvious suggestion that the 'tragic' chorus originated in such a dance of goat-men; but the satyrs who form the rout of Dionysus have more characteristics of horses in early art. The origin of the various forms of play, tragedy, satyr-drama, and comedy has been the subject of endless theorising from the time of Aristotle to the present day; but the facts about the early development of these various forms are extremely obscure, and it is impossible now to trace with certainty their relation to the primitive rites or dances from which they were respectively derived. It is even uncertain how far the difference between them is essential, how far due to more or less artificial differentiation. It has been suggested that the origin of drama, especially of tragedy, is rather to be sought in the commemorative rites performed over the tombs of dead heroes, as in the case of the tragic choruses commemorating the 'sufferings of Adrastus' at Sicyon, which Cleisthenes transferred to the service of Dionysus. But even if we admit that some characteristic elements of Greek drama may be traced to such

¹ For the literary history of the drama see § 155 to § 164.

a source as this, it is not therefore necessary to derive all dramatic performances from it.

425. The conventional forms taken by tragedy and comedy at Athens were developed in the sixth century B.C. from local Attic celebrations which, whatever the origin of some of their elements, were at that time dedicated to Dionysus; and it is this brilliant development at Athens to which dramatic festivals owe their chief interest. The two festivals in Athens at which plays were performed were the Great or City Dionysia (Διονύσια τὰ ἐν ἄστει), about the end of March, and the Lenaea (ἐπι Ληναίῳ ἀγών) about the end of January. At both alike the plays were performed in the great Dionysiac theatre. The Great Dionysia formed one of the chief festivals of Athens; they were held at a time when the city was full of strangers as well as citizens, and were celebrated with great pomp and magnificence. They appear to have included a festal procession and sacrifice, and also choric dances in honour of the god; the festival of Lenaea was probably of earlier foundation, and of a similar nature, though in the days of the drama it had sunk to a subordinate position, and was only a local festival of the Athenians. Tragedies seem to have been performed in Athens before the middle of the sixth century, though their state recognition at the Great Dionysia did not take place until some years later. It is uncertain when tragedies began to be introduced into the Lenaea; it was probably not long after the middle of the fifth century; but the festival was never on the same footing as the Great Dionysia in this respect. In the fourth century and later, when it was recognised that the great days of tragedy were past, it was customary to add to the dramatic contests of the Great Dionysia, after the Satyric play, and of the Lenaea also, a revival of an old tragedy; and the new plays to be performed came to be less in number. Comedy was not adopted so soon as tragedy into the religious festivals recognised by the State. New plays were brought out both at the Lenaea and at the Great Dionysia; especially at the latter, if they were tragedies; but in the case of purely political satires, such as the *Acharnians*, the Lenaea offered an opportunity for addressing the Athenian citizens alone, without holding them up to the ridicule of their neighbours (αὐτοὶ γὰρ ἔσμεν οὐπὶ Ληναίῳ τ' ἀγών *Ach.* 504). New comedies continued to be produced at both festivals throughout the fourth and probably the third century, while the 'middle' and 'new' comedy were flourishing. In the second century we find that the same custom had come in as in the case of tragedy; the representation opened with an old comedy by a well-known poet, before the new ones were brought on. Such revivals were, as was to be expected, mostly from the 'new' comedy of Menander and Philemon; the 'old' comedy, with its political allusions and ephemeral jests, did not interest the later Greeks, at least on the stage.

Development
in Athens.

Great Dionysia
and Lenaea.

The celebration of the Dionysiac festivals was, of course, like all other religious ceremonies, under the control of the State; the arrangements were presided over at the Great Dionysia by the Archon Eponymus, at the Lenaea by the Basileus. The production of plays, the hire of the chorus, the provision of dresses and accessories, formed one of the chief liturgies in the fifth and fourth centuries, and was discharged by the richer citizens in turn; it was called choregia, and the man who undertook it was called a choregus. After the fourth century the wealth or the public spirit of the Athenian citizens had so far decreased that the system of choregi had to be given up; the State undertook the expense of production and an agonothetes was appointed to administer it. The audience consisted of both Athenians and visitors; special places were reserved for priests and officials, the central one of the front row being assigned to the priest of Dionysus Eleuthereus. Common people had to pay for their seats, but the fee was provided by the State for needy citizens. There is no satisfactory evidence that any distinction of class or sex was made in the right of admission. It has been much disputed, on grounds of probability, whether women were admitted, especially at comedies; but the evidence seems to show conclusively that they were.

The tragic actor's dress and make up was confined in later times to a limited number of recognised types; though the descriptions we have of these are of late date, it is probable that they were stereotyped in accordance with the practice of the earlier period. All alike wore high buskins (*κόθορνοι*) to increase their apparent stature, and huge masks with a wig surmounting a conical erection above them (*ὄγκος*) enclosing the whole head; their bodies were also padded in proportion. The masks and dress of comic actors were taken from ordinary life, and conformed, at least in later times, to a certain number of easily recognised types. The masks, however, in this case, were more grotesque and exaggerated in expression, even in the 'new' comedy of manners where they seem to us so much out of place.

The theatre buildings of the Greeks are known to us not only from the descriptions of Vitruvius and other writers, but also from many extant examples which, on the whole, confirm those descriptions. In no case, however, have we any satisfactory evidence of the arrangements as they existed during the fifth century, when the extant plays of the great dramatists were written. These must therefore be inferred from the evidence supplied by the plays themselves, by extant remains of later date, and by various other literary records. In the earliest times choric dances in honour of Dionysus were held on any convenient spot, usually in or near his sacred precinct.

Origin.

When an actor was introduced, he is said to have mounted

Order of
celebration.

Dress of
actors.

Theatre
buildings.

on a table or a cart so as to be visible over the heads of the chorus to the surrounding spectators. The first improvement was probably a low and rough platform or stage for the actors, and a booth (*σκηνή*) to serve as a dressing and property room; the stage would naturally be placed close to this booth, which would also serve as a background; and the spectators would group themselves on the further side of the dancing-place, *ὄρχήστρα*, which would be chosen, if possible, in such a position that a natural slope of a hill would enable a crowd to see and hear well what was going on. Such are the essential parts of a Greek theatre at all periods, though they were later given a permanent and elaborate architectural form. In early times it was customary in Athens for the actors to set up their booth and dancing-place in a part of the agora which later retained the name of the orchestra; but the physical advantages of the great precinct of Dionysus south of the Acropolis soon led to its being preferred for all theatrical performances. Here an early circle of stones may still be traced, partly underneath the orchestra of the present theatre, partly under its stage buildings, which doubtless formed the border of the old orchestra on which, in the earliest period, the Attic drama was played; the booth and stage, and also the spectators' seats, were probably temporary erections of wood. It is said that the temporary structure of the theatre at Athens gave way in 499 B.C. when Aeschylus and others were competing; but the stone theatre which took its place was not completed until the time of Lycurgus, shortly before 330 B.C., so that all the plays we know must have been first performed in a temporary, or at least an unfinished theatre. The theatre of Dionysus, as completed by Lycurgus, consisted of an auditorium (*θέατρον*), partly cut out of the Acropolis rock, partly built on massive substructures and supporting walls. Its lines, especially in the lower part which bordered the orchestra, followed the shape of a semicircle prolonged towards the stage by tangents. It was, as in all other theatres, divided by a horizontal gangway (*διάζωμα*) and by staircases (*κλίμακες*) into wedges of seats (*κερκίδες*), and in the lowest row were thrones for priests and officials. Leading out of the orchestra on either side were the *πάροδοι*, by which the chorus entered. All that is left of the stage building is the foundation, consisting of a massive wall between two projecting towers: the space between these probably served for the erection of whatever stage or scenery was required. In later times a proscenium with a front consisting of short columns was substituted; such a proscenium is better preserved in other theatres.

History of
the theatre at
Athens.

At Epidaurus the theatre, designed by the younger Polycleitus in the fourth century, was a marvel of symmetry. The auditorium is almost elliptical in its curve, being drawn from three centres; it is well preserved, as also is the circle of the orchestra, bordered by a line of white stone. The stage buildings can be restored from the extant foundations and architectural fragments; it is, however, a matter of dispute whether they are contemporary with

Other Greek
theatres.

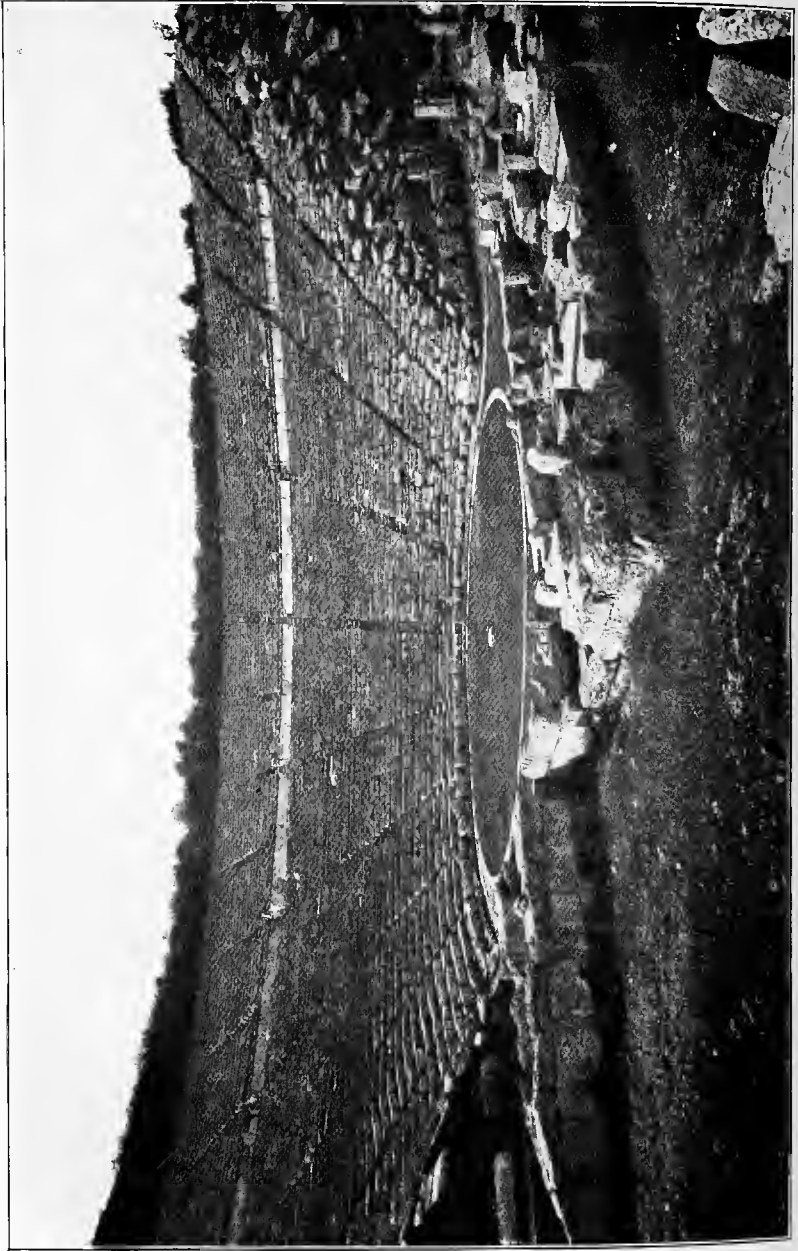


Fig. 92. The Theatre at Epidaurus.

the theatre; similar constructions, some of them better preserved, are found in many other Greek theatres, but none of them can be assigned with certainty to a date earlier than the second century B.C. In all alike there was an oblong building, the *σκηνή*, at least two stories high, often, probably, considerably higher. In front of this was a platform carried by a row of columns, the *προσκήμιον* or *λογείον*; it is usually about 12 feet high and 10 feet broad, and corresponds to the Greek stage as described by Vitruvius. In some theatres, as at Sicyon and Megalopolis, there are indications that a wooden proscenium, probably of similar form, preceded

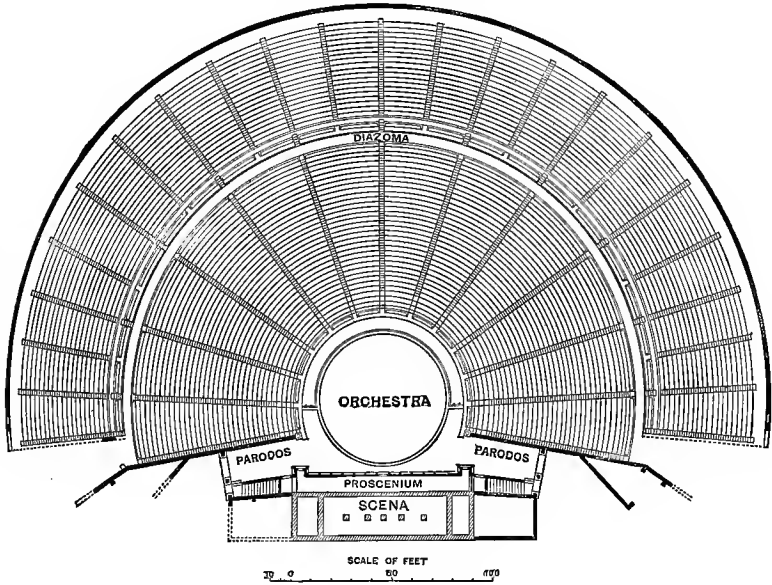


Fig. 93. Theatre at Epidaurus.

the stone one. The space between the columns was usually filled in with slabs of wood (*πίνακες*); and there were also, in most cases, doors leading between them on to the orchestra. The top of the platform was approached by doors leading through the wall of the *σκηνή*; it was also accessible at each end, either by a door in a projecting tower (*παρασκήμιον*), a ramp, or a return of the platform round the side of the *σκηνή*. These side-entrances had, both for actors and chorus, a conventional meaning derived from the position of the theatre at Athens; those entering from the west, on the actors' left, were supposed to come from the city or harbour, those from the east, the actors' right, from the country. Where this statement as to right and left is reversed, it is made

from the spectators' point of view. The stone *σκηνή* of later Greek times usually had an architectural decoration which served without modification or addition to represent the palace or other building in front of which the action took place. Illusory scene painting, such as exists on the modern stage, was not attempted; the scene painting for which Agatharchus was famous in the fifth century was probably a kind of architectural perspective which took the place later supplied by solid architecture. Changes of scene were indicated in a purely conventional manner by triangular prisms called *περίακτοι*, which could be turned so as to show different objects or symbols painted on their various sides. Other appliances connected with the *σκηνή* were the *ἐκκύκλημα*, a kind of movable platform or turn-table that could be revolved as a conventional manner of representing the interior of a building, the *μηχανή*, a sort of crane on which deities and others appeared suspended in the air, and the *θεολογείον*, a high platform for the appearance of the gods. The *χαρώνιοι κλίμακες* served for the entrance of infernal deities or ghosts, probably through a trap-door. It has been proposed to recognise them in the steps leading to the subterranean passages that have been found below the orchestra in some theatres; but as no such arrangement existed at Athens or Epidaurus, it cannot have been indispensable to the performance of a Greek drama.

It has hitherto been generally assumed that the proscenium served as a stage upon which the actors appeared, and that a raised stage was usual in the Greek theatre. This has, however, been disputed most cogently by Professor Dörpfeld, mainly on the following grounds:

The stage question.

(1) That a stage of such proportions, about 12 feet high and 10 feet broad, would be inconvenient and even dangerous for the actors.

(2) That actors on such a stage would be partly invisible to the nearer spectators in the lowest tiers of seats.

(3) That the extant dramas imply a ready communication, and even a possibility of actual contact, between actors and chorus, such as is precluded by a stage 12 feet high.

(4) That according to the old view the stage was at first low, then became higher in Hellenistic times, and lower again in Roman theatres; and that such a broken development is improbable.

It is accordingly suggested that the proscenium was a background, not a stage, and that the actors appeared on the orchestra level in front of it. In addition to avoiding the above objections, Professor Dörpfeld maintains that we thus obtain a continuous development. The table or cart, if it ever existed, was soon discarded, and the actors wore high cothurni instead, to raise them above the chorus. The *προσκήνιον* was merely an ornamental front to the *σκηνή*, and formed a background to the actors; the platform above it may have served as the *θεολογείον*. In the Roman theatres the actors remained in the same position, but half of the

orchestra was sunk to a depth of five feet or so, leaving them on a low platform.

The objections to this view are very serious. The chief one is that it provides no adequate reason for the presence of the platform in front of the *σκηνή* in all extant theatres. The use of the *θεολογείον* was too rare to justify so universal an arrangement; and, if not wanted for a stage, such a platform spoils the architectural form of the *σκηνή*, as representing a palace. We know, moreover, from inscriptions that its official name was not only *προσκήνιον* but also *λογεῖον*. This nomenclature also upsets the theory of continuity, for in the Roman as in the Greek theatre, the name proscenium or logeum is given to the platform, not to the ornamental front of the *scena*. The objections to the old view may be met as follows:

(1) A stage of similar height existed in the theatres of Asia Minor, where the actors certainly appeared, as Professor Dörpfeld himself admits, on the top of it; it cannot then be impossible for Greece.

(2) A high stage would be optically inconvenient only to the occupants of a very small number of seats, those at the ends of the front rows, probably minor officials; and even they would lose very little of the action.

(3) The absence of communication between actors and chorus is far the most serious difficulty; in extant plays such communication is certainly not uncommon, and it is difficult, if not impossible, to believe that the plays were written to be performed on stages such as are now extant. These, however, are all of a date much later than the plays; and it has been suggested that in the fifth century the stage was lower and more accessible from the orchestra. It must however be admitted that a stage of this description cannot be inferred from any architectural evidence. It is possible that the arrangements at Athens in the fifth century were quite different in character; but even if the *σκηνή* was a temporary construction, it must have followed some conventional scheme; for the intervals between the plays did not suffice for the erection of a special setting for each.

The raising of the stage and its separation from the orchestra is in conformity with the literary development, in which the chorus was either separated from the action of the drama or entirely suppressed. The later form of proscenium must, however, be considered in relation to the revival of earlier plays. Many of the plays in which a proximity between actors and chorus is required may never have been revived; we have, for example, no instance recorded of the revival of a play of Aristophanes; but when communication was necessary, we are informed that temporary steps like scaling ladders were used. Such a device may well have been tolerated in a revival of an old play.

(4) The development of the stage in the Greek theatre is continuous, if it became steadily higher. The Roman theatre need not be considered

in this connexion; it was a new arrangement to meet different conditions.

426. The second class of extraordinary ritual is that in which the essential thing is a revelation made by the god or a special exercise of his power for the benefit of the worshippers; the ceremonies practised by the worshippers on these occasions are important not so much in themselves as for the sake of the immediate result which they produce, since the worshippers thereby acquire either a declaration of the will of the gods (Oracles of conduct), or a physical or moral change in their own nature (Shrines of healing and Mysteries).

In the most primitive stage of religion, we find various occult practices used by sorcerers and others so as to compel the gods to do the will of men; with a higher conception of the power and nature of the gods, their place is taken by the art of divination or soothsaying, of which the object is to find out the will of the gods, in order that men may act in accordance with it, or at least so govern their conduct as not to clash with it, in order to obtain what is good and to avoid evil. Hence it is especially employed when any calamity or plague shows the gods to be displeased, or when any project, of which the issue is doubtful, is contemplated. The foretelling of the future is often incidentally involved, but is not the essential thing. Calchas, best of seers, knew by his prophetic skill 'what is and what shall be and what was before.' There were many means of divination in Greece (*μαντική*); they may be divided into direct and indirect; and also into spontaneous and artificial (*τεχνικόν*). Direct divination comes in inspiration, usually accompanied by madness or phrensy, or in dreams; in some cases the meaning of this might be obvious, but more often it required skilled interpretation; and means are said to have been taken to induce it, such as inhaling mephitic vapour, chewing bay leaves, drinking blood, or sleeping under conditions likely to excite dreams. Indirect divination consisted in observing natural phenomena, the flight of birds and the proceedings of other animals, or in listening for chance utterances overhead. Here too the application might be obvious; but more often skilled interpretation was necessary, as it also was in the case of divination over sacrifice; both the state of the chief organs in the victim, and the manner in which the fire burned on the altar, were taken as an indication of the will of the god, and of his acceptance of the offering. One of the commonest forms of divination was by sacrifice; if the result was favourable, the *ιερά* were said *καλλιερεΐν*, or the same verb was sometimes used of the sacrificer.

All these kinds of divination were used by the various oracles of Greece, though they might also be practised on any spot. Such oracles were numerous, though some of them came to exceed others in reputation, from the sanctity of their worship or the skill with which they were administered. The best known of all were those

Extraordinary
ritual,
(b) in mani-
festation.

Oracles;
divination.

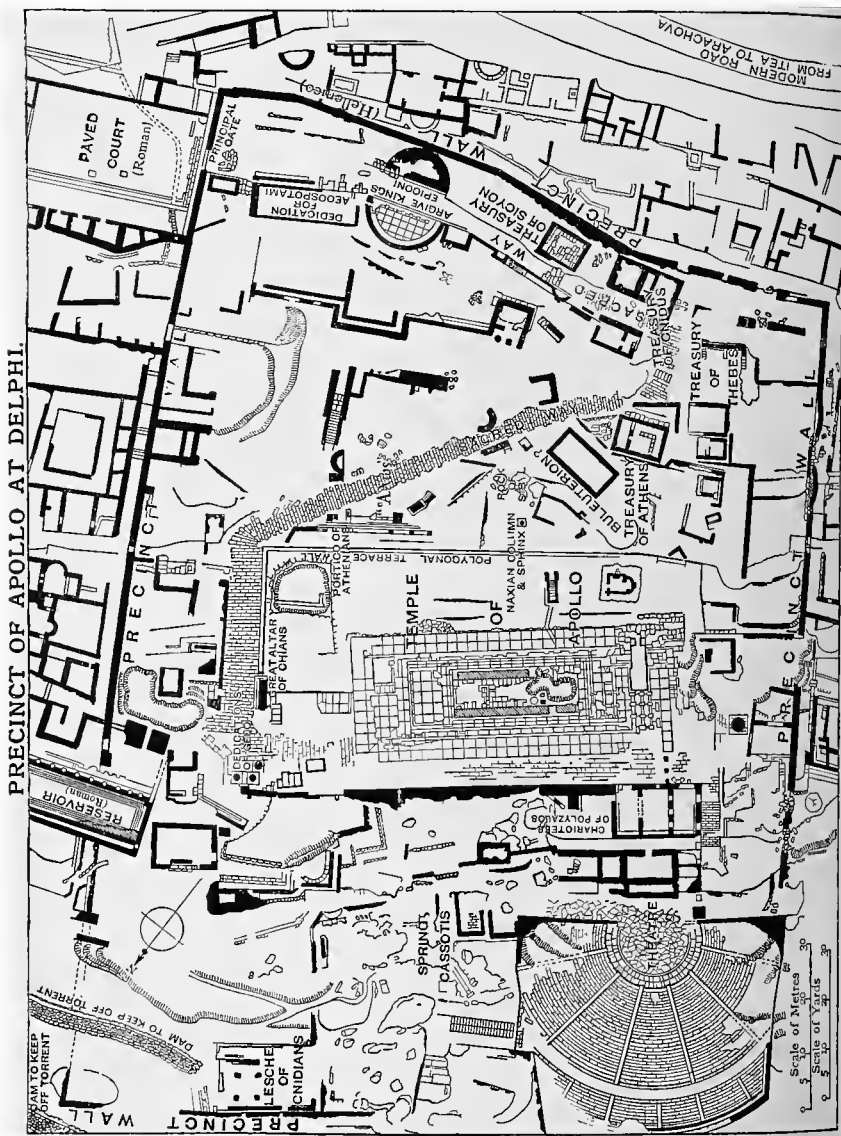
Dodona.

of Dodona and Delphi. At Dodona the shrine seems to have been served by the primitive and barbarous tribe of the Selli (called by Homer *ἀνιπτόποδες χαμαιεῦναι*); the priestesses were called *πέλειαι* or doves. In early times the response was obtained by listening to the rustling of the sacred oak-tree; later bronze caldrons were set up, which gave various sounds to the wind; and a statue of a boy, dedicated by the Corcyreans, held in his hand a whip with astragali, which hit against a caldron. All these sounds were doubtless interpreted after certain codes known to the priests. Many questions, written on sheets of lead, have been found at Dodona, but no responses; they are of various nature, from questions of state policy, or of the success of private commerce, to enquiries after lost property or a wife's fidelity.

At Delphi the Pythia, after drinking of the sacred spring, delivered the responses, which were recorded and interpreted by the prophetes, who reduced the answer into hexameter verse, until Delphi. the time of Pyrrhus; later they were in prose. The tale of the cleft and its intoxicating vapour lacks early authority. The influence of the Delphic oracle was very great, owing in great degree to the skill with which it was managed by the officials; it is not to be supposed that the whole system was a pious fraud; doubtless the prophetes honestly attempted to make sense and metre out of the ravings of the Pythia; but clearly a good deal of discretion in editing was left to him. When consulted on matters of fact or future events, the oracle usually kept on the safe side, with the help of obscurity or ambiguity; e.g. *Κροῖσος Ἄλυν διαβὰς μεγάλην ἀρχὴν καταλύσει*. In matters of ritual or religion it was constantly referred to, and it probably contributed in a great degree to the assimilation and systematisation of the great mass of floating myths and customs which existed in Greece. In spite of a political bias which weakened its authority during the Peloponnesian war, Delphi continued to have an authority on religious matters, which it shared with Dodona; few new departures in religion, even in matters of detail, were taken without consulting some oracle of high credit.

427. Some of the places resorted to by invalids in search of health are of the nature of oracles, and in that case cannot be rigidly distinguished from oracles of conduct; such were that of Healing shrines. Amphiaraus at Oropus and that of Trophonius at Lebadea.

In the Amphiaraeum the custom was for the person consulting the Hero to sleep in his sanctuary on the skin of a sacrificed ram; the dream that came to him was the response, and was interpreted by the priest. Much the same was the custom at Lebadea, where, however, the preliminary ceremonies were more complicated and awe-inspiring, and where the worshipper was let down into a hole in which he saw visions. In both cases the communication of the god was given to the worshipper himself directly, not through a professional medium; this is the main distinction from oracles such as Delphi.



PRECINCT OF APOLLO AT DELPHI.

Fig. 94. From the Encyclopaedia Britannica, reproduced by permission from plans in Bulletin de Correspondance Hellénique, 1897. XVI. XXVII



Fig. 95. Delphi.

The cures worked by **Asclepius** at his especial precinct at Epidaurus, and also at Athens and elsewhere, partake to some extent of the nature of these dream-oracles. The patient always slept in a special building called at Epidaurus the *ἄβατον*; and sometimes, especially in later times, the priestly interpretation of his dream may have amounted virtually to a medical prescription. But in the lists of earlier cases the cure is almost always represented as instantaneous. These lists are not contemporary with the cures they record, but they are probably based to some extent on dedicatory tablets and other documents, and are not entirely apocryphal. Some surgical cases may be explained as a slight exaggeration of actual operations; but many of the cases may well be perfectly authentic 'miracles,' such as those which are known to occur at Lourdes and at Tenos at the present day. The cure effected usually follows the same formula. The patient sleeps in the abaton; he sees an appropriate vision, in which the god or one of his sacred animals, especially the snake, touches the part affected; and in the morning he goes forth whole. An excellent, though burlesque, description of the scene in the portico where the patients slept is to be found in Aristophanes' *Plutus*.

428. Mysteries were rites in which certain privileged worshippers were admitted, after due preparation and under a bond of secrecy, to certain sights and ceremonies which were calculated to have a permanent effect on their character both on earth and in the other world. Such mysteries existed in several places in Greece, but the most important by far were the Eleusinian, which were imitated elsewhere. Those of Samothrace were also of high repute. The source from which the Eleusinian Mysteries were derived is a puzzle; tradition attributed them to Thrace and to Orpheus. Like the Olympian games, they are unknown to the composers of the *Iliad* and *Odyssey*; but we cannot imagine the Mysteries, like the games, to be a purely Hellenic growth of later times. Their foundation is assigned to Eumolpus, whose descendants always supplied the Hierophant, or chief official of the Mysteries; he was assisted by other Eleusinian officers: the Daduchi, or torch-bearers, from the family of Triptolemus (to whom Demeter first gave the corn), the Herald, and others. Probably in Solon's time the Eleusinia were taken into the recognised State religion at Athens, and the Lesser Mysteries were founded at Agræ, a suburb of the city. Under Pericles they were raised to a Panhellenic festival, and their importance grew more and more as faith in the State religion declined; they were especially encouraged by mystic philosophers and others as a rival to the growing power of Christianity, and therefore are much reviled by early Christian writers.

The first stage in initiation took place at the Lesser Mysteries at Agræ, in Anthesterion (February); in the following Boedromion (September) the worshipper was admitted to the lesser initiation at Eleusis (*μύησις*); another year must elapse

Epidaurus.

Mysteries.

Eleusis;
history of
mysteries.

Order of
celebration.

before he was allowed full participation (*ἔποπτεία*). New participants had to be under the direction of a mystagogue. The ceremonies of the Eleusinia began in Athens on the 15th of the month, when the mystae assembled at the Stoa Poecile (*ἀγυρμός*); on the 16th they bathed in the sea (*ἄλαδε μύσται*) and also washed a pig which they sacrificed next day at the Eleusinion at Athens. On the 19th the great procession to Eleusis started, and arrived after sunset. There the mystae fasted, roamed about the shore, and sat on the stone where Demeter mourned for her daughter (*ἀγέλαστος πέτρα*). When worked up to a state of religious excitement by wandering in the dark and fasting, they were admitted to the brilliantly lighted hall (*τελεστήριον*); then the final ceremonies of initiation were performed, the sacred fast was broken, and the sacred drama was performed, on the nights of the 22nd and 23rd. On the 24th followed games and theatrical performances; on the procession back to Athens the mystae

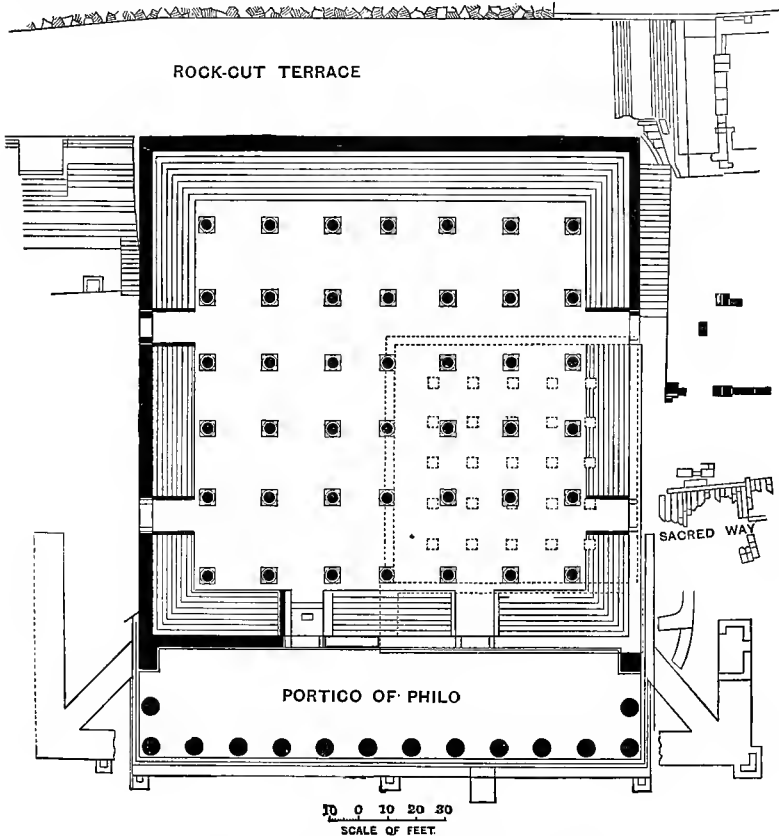


Fig. 96. Hall of the Mysteries at Eleusis.

were met by the rest of the people at the bridge over the Cephissus, and interchanged jests with them (*γεφυρίζειν*).

The Teles-
terion.

Recent excavations at Eleusis have shown that the *τελεστήριον* was a great hall, surrounded by steps on which the mystae sat to observe the sights and sounds provided for their edification. As to what actually

happened in the *τελεστήριον*, we are imperfectly informed; some have wondered that the Mysteries kept their secret so well; but in reality there probably was no secret to keep. The essential thing in the Mysteries was not the imparting of any doctrine or revelation of mystic truth, but the production of a certain mental state, induced by fasting and religious excitement, in which the partaking of the sacred food and drink, the handling of certain sacred objects, and the hearing and seeing of the sacred drama and chants (*δρώμενα* and *λεγόμενα*) made so great an impression on the excited imagination as to leave a permanent effect on the character. The drama doubtless represented scenes connected with the Great Goddesses of Eleusis, Demeter and Core or Persephone. In earlier times, as represented by the Homeric hymn to Demeter, it was probably the well-known tale of the sorrow of Demeter and her search for her lost daughter, and the return of Core. Dionysus and Iacchus were certainly prominent in the myth and ritual under Athenian administration, and in Hellenistic times the Zagreus story was introduced. The allegory of the death and resurrection of the corn, and its application to human life, was

Character
and influence
of the
Mysteries.

probably never lost sight of. But what is most striking is the moral effect on the mystae, attested by so many of the greatest and most respected of classical writers, who always speak with the utmost reverence of the Mysteries though

many of them are by no means slow to condemn what they think unworthy in the popular religion. In common belief, too, those who had been initiated had a happier lot after death. All the symbolism employed may not have been in accordance with modern notions of decency or dignity; but it cannot be doubted that the general impression produced on the worshippers was similar to that now attributed to the most sacred and solemn religious observances.

For Mythology and Religion:—Farnell, *Cults of the Greek States*; Preller, *Griechische Mythologie* (4th ed., by Robert); Roscher, *Lexikon der griechischen und römischen Mythologie*; Harrison and Verrall, *Mythology and Monuments of Ancient Athens*; Frazer, *The Golden Bough*; Pausanias; J. E. Harrison, *Prolegomena to Greek Religion*. For Athletic Festivals:—E. N. Gardiner, *Greek Athletic Sports and Festivals*. For the Theatre:—Haigh, *The Attic Theatre*; A. Müller, *Griechische Bühnenaltertümer*; Dörpfeld, *Das griechische Theater*; Puchstein, *Die griechische Bühne*; W. Ridgeway, *The Origin of Tragedy*; F. M. Cornford, *The Origin of Comedy*. For Eleusinia:—Lenormant, in Daremberg and Saglio, *Dictionnaire des Antiquités*; Philios, *Éleusis*. For Epidaurus:—Cavvadias, *Épidaure et ses ruines*.

VI. PUBLIC ANTIQUITIES.

VI. I. CONSTITUTIONS.

A. DEVELOPMENT OF CONSTITUTIONS.

429. THE origins of the political institutions of the Greeks are to be found in the different elements which made up the Greek race (see §§ 31 ff.). From the civilization which excavations have revealed in the Aegean islands and above all in Crete, we can form some idea of political conditions. The rulers lived secure, fearing neither attack from without nor insurrection from within. Their fleets which held the seas protected their coasts, while within the islands they commanded the service of their subjects to produce great buildings, to develop to a high degree arts and crafts, to maintain peace between the great men of the land. As far as may be deduced from the material evidence, the idea of the State was triumphant over the resistance of the family unit, which retarded and at the same time strengthened the political growth of the Indo-European peoples. The dwellers in the islands lived in little towns which clustered under the shadow of palaces; their religion was of the race or state rather than of the family. Government was almost bureaucratic, with careful accounts and regular officials. The nobles were courtiers rather than country barons; and in the little towns was found the centre of the people's social life and interests. Thus in a measure the political development in Crete is an anticipation of the city State of later times.

The earliest
people.

The mainland of Greece shows an early civilization apparently of the same origin but faced by different natural and political conditions. Here we find not open towns and palaces but great fortresses such as Tiryns and Mycenae. The fortresses are like the castles of Norman barons standing among a subject, often hostile population. The subjects must have been half-serfs, for no voluntary labour would have piled up the great fortifications and palaces in that rocky country. No doubt what was civilization in the islands became oppression on the mainland. Meanwhile Greece proper, from Thessaly northwards, stood aloof from this development and remained in a comparatively primitive condition at a time when the

Peloponnese was enjoying advanced material culture. Of the political institutions of Thessaly and Northern Greece at this time we can form no clear idea. They may have been those of the Northern people who were to make an end of the ordered life of Southern Greece and the islands.

430. Of the ending of this period of what may be called Aegean civilization we have no certain knowledge. In the second half of the Second Millennium the centre of power appears to have shifted from Crete to Mycenae in Southern Greece. But before the end of the Second Millennium people of Indo-European race from the North broke into this ordered world. Throughout the whole of the Aegean area there were movements of peoples, and the result of the dislocation thus caused was the collapse of the older civilization and social order, though the material culture rather waned than was extinguished. The newcomers brought with them a political system in which the family was all-important. In their wandering the members of a family had learnt to render absolute obedience to their head, and, when they settled down in the new land, this order continued. Moreover as newcomers they felt distinctly the bond of race which united them as much as it separated them at first from the older people. Their political life consisted of two forms of loyalty, to the head of the family and to the larger racial unit the tribe (*φυλή*)—with the leader in war at its head. The northern peoples moreover were not town-dwellers, and did not as a rule occupy the towns of the older inhabitants but preferred to live scattered in villages without elaborate fortifications. Even in historical times the Aetolians and some other peoples in Western Greece are described as living *κατὰ κώμας ἀτειχίστους τῷ παλαιῷ τρόπῳ*. The relations of the newcomers towards the older people varied according to the conditions of their settlement, but in general the older people, if they were not driven out, occupied a subject position. But from the very beginning the older people and the newcomers from the North began to be fused together, and there slowly arose a new form of society in which the ideas which were found strongly marked in the northern people guided the political development, while most of what material culture there was seems to have been the legacy of the older race. This fusion of people produced what we know as the Greek race and with the history of its political development begins Greek constitutional history.

431. The main source of evidence for the early stages of this political growth is to be found in the Homeric poems, for the Greek Epic looks back to an Heroic Age, and this age seems to correspond to the early days when the fusion of races in the Greek peninsula was fairly complete and the political order was being developed. While the picture which the *Iliad* and *Odyssey* present is romantic in colouring, we receive from the poems a clear impression of political and social conditions. They show aristocracy established. The chiefs (*βασιλῆες*) settled in different districts in Greece, formed with their kinsmen a class of nobles (their rank implied in the use of such terms

Homeric
Greece.

as ἄριστοι, ἀριστῆες) raised in dignity and power above the rest. Many of the chiefs had taken as their seats fortified castles (πόλισμα or πτολίεθρον), which had been built for the rulers of the earlier people, and Homer depicts a court life of wealth and lavish feasting and minstrels singing of noble deeds. The chiefs were foremost in battle, followed by their ἔταιροι (who recall the *comites* of the Germans and the followers of the Macedonian kings). Below the privileged class of chiefs and warriors come the class called δημοεργοί, craftsmen or small farmers cultivating their own lot of land, and last of all the poor freemen (θῆτες) working for hire. Of slaves there were but few. The heroic kingship is described by Aristotle as heroic rule willingly accepted: the kings claimed divine descent (διογενέες, διοτρεφέες) and were under the special protection of Zeus. Their powers, which included leadership in war, judgment of disputes and mediation with the gods, were limited by the custom of consulting other orders in the State. Thus it was usual for the king to seek the advice of a council, composed of certain chosen chiefs (called γέροντες βουλευφόροι though they were not necessarily old men); and the commons might be summoned to the ἀγορά to learn the decisions or to hear the discussions of their chiefs. There they might express approval or dissent by shouting, but they were powerless to alter the resolves of their masters. In the βασιλεύς, the βουλή and the ἀγορά we may recognise the germs of later political authorities, magistrates, council and assembly. The *Iliad* has for its scene the camp of an army on foreign soil in which many princes, each the ruler of his own domain, are combined under the leadership of Agamemnon, who enjoys a higher degree of kingly rank implied in the titles βασιλεύτερος and βασιλεύτατος. The *Odyssey* represents a number of chiefs assembled in Ithaca, recognising no rule in the absence of Odysseus and claiming equal dignity. Telemachus admits that in default of Odysseus another might be king, though he claims lordship over his own estate and dependents.

The very character of the Homeric poems makes it certain that they over-emphasise the difference between gentle and simple. When allowance is made for this it remains true that the idea of the personal dignity of the freeman which has so large a part in the thought of Indo-European races was potent from the beginnings of the Greek people. The power of this element was increased by what is called the Dorian Invasion which apparently took place after the age reflected in the Homeric poems. This so-called invasion was the immigration of a new group of northern people into the Greek world which caused much dislocation and scattering of the Greek people. The newcomers gave a fresh vitality to the northern element in Greek political life, while they destroyed or impoverished much of the civilization which was growing up on the ruins of the older Aegean culture. This crisis in the history of the Greeks is hidden from us, but to it is no doubt due much of the difference which is seen when we turn from the Greece of the Epic to the Greece of historical times.

432. When we are first able to trace the political institutions of the Greeks at the beginning of the eighth century, they are found to be based on organisations widespread throughout the great mass of the people, and not limited to an aristocratic class. The most important factors in society were the sense of solidarity of the family and the looser bond of the tribe (*φυλή*). In some cases the tribes felt themselves part of a larger racial unit, thus the three tribes of the *Ἀπόδωται*, *Ὀφιονεῖς* and *Εὐρυτᾶνες* were all *Αἰτωλοί*. The larger national unit was called an *ἔθνος*, which in early times reflected rather a distinction from surrounding peoples than any real inner organisation. The true political boundary of the early tribal State is the point at which the sense of the tribal bond becomes weak. Within these tribal-groups there were families each with their headman: and one of these men was the chieftain (generally called *βασιλεύς*) who led the tribesmen in war, then almost the only business of a State. In general the *βασιλεύς* was assisted by a Council of elderly experienced chiefs called *γερονσία* or *βουλή*. With settled life in Greece and the islands smaller organisms arose. The country of Greece is so broken up into little glens and valleys, and the tendency to live in little villages was so strong, that local needs and interests tended to produce smaller political unions. Besides this the strong sense of the family-bond which the newcomers brought with them caused a family solidarity more clearly felt than the bond of common descent within the tribe. When both ties between prosperous and related families were sharply realised the result was a *γένος* or clan; when the feeling of union rested rather on local solidarity and mutual help in war the union took the freer form of the *φρατρία* or brotherhood. These groups were not mutually exclusive, though both were usually local in character. It must not be assumed that the larger political unit, the tribe, was artificially built up of local units of village communities and the like. Membership of a *γένος* or *φρατρία* bore a social meaning, the political position of a man in the State rested on his birth within the tribe. Race, not residence or clan-membership or brotherhood-membership, is the test. Later Greek political speculation conceived of the primitive State as arranged in concentric rings, beginning with the family and ending with the tribe, but this artificial theory is not borne out by the historical evidence. The Greeks conceived of common race as descent from a common tribal ancestor and carried this idea of common descent into unions where it could only be fictitious. Thus members of a *φρατρία*, originally a free association for mutual help, began to regard themselves as in a sense related and to worship a fictitious ancestor. Moreover, as religion was to the Greeks the obvious sanction of all unions and the Greek religion was in great measure ancestor-worship, the associations took a religious form. Thus in the earliest days of the Greek race there was the great political institution of the tribe (*φυλή*) sometimes forming part of an *ἔθνος*, and the unit of the family (*οἶκος*), together with two forms

The Tribal
State.

of association, the *γένος* and the *φρατρία*, all of these supported by the sanction of religion and resting on real or fictitious ties of birth.

These primitive tribal communities were subject to influences, economic, religious and military, which had varying effects in different parts of Greece. Many of the cities of the earlier people ceased to be centres of population after the great immigrations from the North. But there were districts such as Boeotia where the mixed race of newcomers and earlier people continued the city-life in the old cities, and made them the home of such political life as they had. But throughout the greater part of the Greek world there was no real town-life. The people lived in homesteads and villages (*κατὰ κωμὰς*) over the face of the country. From the beginning however the inhabitants chose some defensible spot where they might take refuge in sudden stress and partially fortified it. This place of refuge was a *πόλις*, and was often the seat of the ruler of the tribal community. In many cases it coincided with an old town of the earlier people. Gradually in many parts of Greece these *πόλεις* exerted a powerful attraction and awoke an instinct for centralised political life (*συννοικισμός*). Where this was aided by other influences the result was a city State in which keenly felt political association took the place of the old dimly felt bond of race.

Formation of
the city State.

Thus in Lacedaemon the military need for union against the older population, here hostile because not absorbed, led the Spartans to make their political centre a city on the Laconian plain. Economic reasons were powerful in inducing the people of the Isthmus to form the city of Corinth which grew up beneath the shadow of the old place of refuge. A combination of causes, together with a strong political instinct led to the formation of Athens, the greatest Greek city State. The people of Attica, while in great measure continuing to live scattered over the country, made the city of Athens their place of government. In these instances the old tribal State based on common birth passed into the new city State based on community of political life. A member of the community is now *πολίτης*, the man who shares in the *πόλις*. This new institution found expression in the colonies which were planted on the coasts of Asia Minor and also in Sicily and S. Italy. The colonists were crowded together on the coast, hemmed in by enemies in the interior: in many cases they were not all of one tribal stock but adventurous spirits from diverse tribes. Thus none of the conditions of the old tribal State were fulfilled and almost perforce the colonists formed themselves into city States. And as commercial intercourse became more and more common between the colonies and the motherland, the colonies did much to quicken the growth of the city State within Greece proper.

433. The city States thus formed showed in a sense a renaissance of the town-life of the older people in the Second Millennium. But there was found in them a vigorous political spirit which was probably the heritage of the northern people. The *πόλις*

Character of
the city State.

stood to the Greeks for freedom (*ἐλευθερία*) and the right to govern themselves as they would (*αὐτονομία*). As a *πολίτης* the Greek felt that he was a member of the community with rights and a will of his own. That was the principle of *ἐλευθερία*. By *αὐτονομία* was meant the right of the *πόλις* to govern itself according to the will of the *πολίται*; it was the extension of the idea of *ἐλευθερία* in terms of the State. This right could only be maintained by complete independence. No alien body must have the least power over the *πόλις*. No form of coalition can be tolerated which infringes the *αὐτονομία* of the State. The only thing which cities can have in common is religion, for that is of the race. Such associations of States as necessity enforced were regarded as religious associations, and thus the complete political independence of the city State was never in theory abandoned. This third principle, the safeguard of the other two, is the principle of *αὐταρκεία*; the city must be self-supporting.

The result was that in those parts of Greece where the city State was highly developed, the idea of citizenship, of membership of a community, superseded the older ideas of race, or of residence. A man who lived at Marathon or Sunium conceived of himself as a citizen of Athens rather than as a man born of Attic parents within the borders of Attica, or as an inhabitant of a particular village. It was now the common citizenship and not the common ancestor in which the bond of union was found. The head of the city State might still be a chief (*βασιλεύς*), his authority might still rest on membership of some ancient family which seemed to be half-divine. But the idea of the city State rested on the will of man; the *πόλις* was to the Greeks a projection of the will of the *πολίται*, and it soon became clear that a *πόλις* could exist without a king. The tribal State, on the other hand, needed a tribal head, for to the Greeks it appeared a family on a large scale and the Greeks could not conceive a family without a single personal head. For all these reasons Greek constitutional history is in the main the history of the city State, which rested on the will of the *πολίτης* guided by the rival or complementary tendencies of aristocracy, oligarchy and democracy.

434. But there were large parts of Greece which either did not develop a city State or retained much of the more primitive tribal institutions. Thus Elis remained through most of the Classical period a tribal state. The Eleans were immigrants and conquerors surrounded by people of the older race who retained partial independence and among whom the Pisatans formed a city State at Pisa. There was not sufficient reason, military or economic for centralisation, for the subjects were not capable of rebellion and the country was given over to agriculture and pasturage. Thus in the valley of 'Hollow Elis' there remained an old-fashioned tribal State, the central point of which was the great sanctuary at Olympia—a religious but not a political capital. The true bond of union was a strong racial feeling which was reflected in the dialect of the country which clung tenaciously to its northern character.

Survivals of
the tribal
State. Elis.

There were local units called δᾶμοι which had grown out of the need for some kind of local control, most probably for the management of common pasturage, but it was not till the fifth century B.C. that these δᾶμοι were correlated by any kind of strong central government. At first the Eleans had been content to be led by a king, but monarchy was superseded by a kind of agricultural oligarchy of the men powerful in the δᾶμοι. The social organisations of the old tribal State flourished in full vigour. The free brotherhoods appear as πατριαί, the clans as γενεαί. All free-born Eleans were fully privileged citizens; whoever was by birth ἀνὴρ φαλῆιος belonged to the community. If he held any position of authority he was τελεστώ, otherwise he called himself φέτας. Had it not been for the fact that all Greece came to Olympia for the festivals, Elis might have remained for ever untouched by the political progress of the city States. But there gradually grew up some of the forms of democracy and in the fifth century a kind of city State.

In Thessaly, where northern immigrants ruled over an earlier people whom they had reduced to serfs (πεινεσταί) the country was divided by the mountain ridges into cantons (Thessalotis, Pelasgiotis, Hestiaotis, Phthiotis), and these formed tribal communities bound together by common race. In general the cantons were quite independent of each other, but important decisions affecting the whole of Thessaly were referred to a gathering of all free Thessalians (οἱ Θεσσαλοί, τὸ κοινὸν τῶν Θεσσαλῶν). Also in time of war the Thessalians united their forces under a generalissimo (ταγός), apparently appointed for life by the whole people. Thus in general Thessaly presented the appearance of a tribal State of the old type. But within the cantons there were cities, most of them the townships of the old people, now occupied by the conquering race. These cities were self-governing, striking coins of their own in quite early times, and carried on political life quite independently of the tribal organisation of the cantons in which they were situated. Here then was presented the singular phenomenon of active city States planted like islands among the usually dormant institutions of the tribal cantons.

435. In the position of the ταγός and τὸ κοινόν of Thessaly is seen a union of tribal communities. Such unions were not so easily formed among city States jealous of their independence. But there are cases where, despite the formation of cities, a sense of race kept alive a shadowy kind of union.

Forms of
Union
between
States.

Thus in the Argolid in the seventh century there was a league of cities united in the worship of Apollo Pythaeus, based on the sense of Dorian solidarity. This league had no political capital, and broke up as the various city States developed their political life. So too in Arcadia, where there was a mixture of city States such as Tegea and Mantinea with small tribal communities such as the Παρρᾶσιοι, a racial union existed which found a religious centre in the sanctuary of Zeus Lyaeus. There was here too an early federal coinage but no definite political union. In Boeotia

also there was from early times a league of cities with a religious centre at Onchestus. By the sixth century the political federation of the country was definitely realised under the leadership of Thebes. This federation was forcibly broken up in the fifth century but reconstituted after 445 B.C. In the Oxyrhynchus fragment of a lost historian (§ 170) is an account of the constitution which had been developed by the beginning of the fourth century. The federal principle is shown systematically applied on a logical basis of representation. The cities of Boeotia, some with smaller places dependent on them (*χώρια συντέλη*), were divided into eleven units of government (*μέρη*). Thebes and her dependencies formed four *μέρη*, Tanagra one, Orchomenus and Thespieae, each with dependencies, two. Other units were formed by the combination of three smaller States. Each *μέρος* appointed one federal governor (*Βουλευτάρχης*), and contributed an equal number of councillors and dicasts, equal contingents of troops, equal taxes to the federal government. Political privilege rested on a property basis. The chief organ of government was the Federal Council (*κοινὸν συνέδριον*) of 660 councillors. From Thucydides (v. 38) we should assume that this body was divided into four *βουλαί* on the principle applied to the government of the single States (§ 438). The federation was broken up by Sparta for a short time but was revived after Leuctra on a democratic basis. Thebes was the place of meeting of the sovereign assembly (*δᾶμος*) and from its general preponderance had a dominant position in the league.

436. Though the tribal State persisted in backward parts of Greece and some cities united in federations, the main political progress of the Greeks was shown in the development of the independent city State. The formation of cities was associated both as cause and effect with the institution of aristocratic government. The transition to aristocracy meant nothing more than the transference to the class of nobles of the sovereignty hitherto entrusted to one of their number. Hence the change did not of necessity involve any break of continuity, it was often gradual and, as the title of *βασιλεύς* might be retained for the chief magistrate, it was sometimes imperceptible. In some cases special causes contributed to lessen the kingly power. As kings were appointed to lead in war, their failure in the field, or even an interval of peace might weaken their authority. City life, which brought the nobles together and fostered political discussion, must have had the same effect, and in particular the union of smaller communities to form cities abolished the monarchic powers of petty chiefs, who were compensated by the position assigned to them on an aristocratic Council. Though the united State might still have a kingly head, his power was modified by the rights gained by the nobles. Whatever the cause of the transition to aristocracy, the constitutional changes involved were neither many nor important. The king, if his privileges were not entirely abolished, shared his power with others and became a magistrate responsible and liable to render account. It was an essential consequence

that the Council should gain importance, for it was in the Council that the nobles expressed their will. On the other hand the commons usually suffered by the institution of many rulers in place of one, and the Assembly in an aristocracy rarely enjoyed serious consideration. Power became centred in a class; the nobles alone had a knowledge of law and religion; they were divided into clans (*γένη*) (§ 432) and this organisation generally served as the basis of political divisions. Sometimes the nobles married only within their own order, as Herodotus tells us of the Bacchiadae at Corinth. The land was held in great part by the ruling class, and in many States the possession of a lot of land was a necessary qualification for privilege. As special forms of aristocracy may be noted the aristocracy of the kingly family (as at Corinth and in some of the colonies), the aristocracy of landholders (as the *γαμόροι* at Syracuse), the aristocracy of knights (*ἱππεῖς* in Colophon, *ἱπποβόται* in Chalcis), the aristocracy of the conquering race (as in Sparta).

437. Aristocracy succeeded to the hallowed prescription which monarchy had enjoyed, but it could not permanently withstand the general progress of the race. The commercial activity of the Laws-givers
and Tyrants. Greeks, due in part to their expansion over the Aegean, and the introduction of money as the medium of exchange (see § 584) had political effects. Men of the lower classes rose to wealth and yet were excluded from the government. On the other hand the small farmers and labourers became indebted to the great landowners, and under the harsher application of the laws of debt forfeited their lands or their freedom. Thus great inequality of property resulted; and the nobles, who still strove to keep power in their hands, administered the laws, the knowledge of which was the secret of their class, in their own interest. A period of political ferment ensued; the social and political disorder called for reform or revolution. In some States lawgivers (*αἰσωνμηῆται*) were appointed to revise and to publish the law (as in the seventh and sixth centuries B.C. Zaleucus at Locri, Pittacus at Mytilene, Draco and Solon at Athens). In many instances they broke the exclusive privilege of aristocracy, wealth took the place of birth, and the characteristic principle of oligarchy was introduced. Often, however, the discontent was so deeply seated that more violent remedies were required. The oppressive government of the nobles or the rich, the concentration of landed property in a few hands, and the consequent impoverishment of the peasants, the exclusion from all privileges of the artisans and traders, prepared the way for ambitious men to seize the tyranny.

In Greece tyranny began early in the seventh century, and the last tyrant was overthrown before the end of the sixth century (Hippias of Athens, 510 B.C.): but tyranny lingered later in some of the eastern and western colonies, where also it was revived in the fourth century. The Greek conception of a tyrant was that of a man ruling without law or responsibility, with a view more to his own interest than to that of his subjects. It was not essential to the idea that he should use his power

harshly or oppressively; later ages, reflecting on the evils of unconstitutional rule, associated with the early tyrants a character that was often undeserved. Some tyrants rose from the unprivileged classes, as Cypselus at Corinth and Orthagoras at Sicyon; more of them were discontented nobles. All gained their position by demagogic arts, by championing the people against the nobles or the oligarchs. Their sway rested on force: they were usually attended by a bodyguard, often employed mercenaries and sometimes raised large armies and engaged in foreign wars. Generally the constitution was suspended and the government was administered by the tyrants. They used their power to break the ascendancy of the former ruling class by banishment and taxation, while they fostered, to some extent, the interests of the commons by colonies, great public works and the encouragement of trade and industry. Tyrants were greatly influenced by the progressive tendencies of the age: they broke with the past and introduced innovations: they favoured new religious cults, in their desire to break down the old worships of the nobles: they sought the sanction and support of the great shrines, such as Delphi and Olympia. They maintained brilliant courts, where artists, poets and painters were welcomed: architecture and lyric poetry owed much to their patronage. The dominions of their States were increased by colonies and foreign conquests. For many reasons tyrannies were usually of brief duration: tyranny had no prescription, the tyrant gained his position by his own efforts, maintained it by force and put down opposition with violence. The Greek instinct for lawful government resented such a negation of constitutional forms: and the repeated expulsion of Peisistratus shows that even a paternal and benevolent administration could not reconcile the citizens to usurpation. The tyranny at Sicyon, it is true, lasted for a hundred years, but in most places tyranny was of brief duration. In some States oligarchy was restored. In others the liberal tendencies of tyranny had emancipated and educated the lower classes and prepared the way for democracy.

438. Oligarchy, in its widest sense, is the government of a minority. Most of the oligarchies of Greece made wealth the qualification for political rights: but some States restricted privilege to birth. Thus in Thessaly (§ 434) the different towns were governed by predominant noble families, a narrow form of oligarchy called *δυναστεία*. In Sparta, as in Crete, compliance with the course of training (*ἀγωγή*) was required from those who were entitled by birth to citizenship. The oligarchies of wealth varied in the assessment required and in the number admitted to privilege. The constitution based on the hoplite census, such as was instituted at Athens after the fall of the Four Hundred, differed little from a moderate democracy and was sometimes denoted by the term *πολιτεία*. The oligarchy of fixed number limited privilege to a definite number of citizens, who themselves elected fresh members in case of a vacancy occurring. The constitution of the Five Thousand, projected at Athens but not realised, would conform to this type: and constitutions of a Thousand existed in several of the colonies. Of the government of

the oligarchies we know but little. Generally speaking the chief power was vested in a Council (*βουλή, γερουσία*) composed of men who had the highest qualifications of birth or wealth, appointed in some cases for life. The cities of the Boeotian federation (§ 435) were governed by four *βουλαί*, membership of which depended on a property qualification. Each of them in turn had the preliminary consideration of business, but the ultimate decision rested with all the *βουλαί*, acting collectively. In oligarchies generally the magistrates, subordinate and responsible to the Council, were entrusted with greater power than was usual in democracies and sometimes enjoyed a longer tenure. In States where an Assembly existed as a separate institution it usually had a restricted competence.

439. Democracy was the government of the people (*ὁ δῆμος*) in which the many (*οἱ πολλοί, τὸ πλῆθος*) exercised political rights and in which the voice of the majority was decisive. Democracy Democracy. was of gradual development and varied with the qualifications required for full citizen rights and with the powers directly entrusted to the people. In the moderate form all citizens were admitted to the Assembly, but a property qualification was required for office, and the Assembly was limited in its functions to the election of magistrates, the exercise of certain judicial powers, and the decision of certain important questions. In the more advanced forms all free men of citizen descent had practically the same privileges. The principle of equality was asserted in the admission of all citizens to most offices (some usually required a money qualification), in the application of the lot to the less important offices, and in the provision of pay for public services. The cardinal principles of democracy were thus equality (*ισότης, ἰσηγορία, ἰσονομία*) and liberty (*ἐλευθερία*) manifested in the freedom of life and conduct, which was greater in democracies than in oligarchies. In the organisation of government the Assembly (*ἐκκλησία*) was the most important element, and exercised a constant control over administration and policy. The direct powers thus entrusted to the majority made oratory important and gave opportunity to the demagogues, one of whom assumed a leading position as the champion of popular rights (*προστάτης τοῦ δήμου*). Usually the Assembly had not itself powers of legislation, the ultimate decision on changes of law being reserved to the law courts; and the democracy was then regarded as a government under the reign of law. Other powers also were, of necessity, delegated. The preparation of business for discussion by the Assembly, the administration in detail, and in part the execution of the measures adopted by the Assembly were left to a large popular Council (*βουλή*). Democracy tended to weaken the executive, except in the case of military magistrates. Powers of administration were subdivided among a number of officials, appointed by lot, who were subject to popular control and responsible at the end of their term. The law courts were regarded, equally with the Assembly, as the normal sphere for the exercise of collective power by the people. Hence their action was not subject to the revision of the Assembly: they were

regarded rather as the means by which the other elements in the State, including even the Assembly, might be compelled to act in accordance with the laws and to observe the principles of the constitution. But the popular constitution of the large jury courts disqualified them for the proper discharge of this function: they tended in fact themselves to override the laws, until there resulted the degenerate democracy, described by Aristotle, in which the many are sovereign and not the law. Of the character and development of democratic institutions Athens, as the leading democracy, forms the best example; and of democracies in other States we have little detailed information.

440. With the establishment of democracy at Athens began the conflict of oligarchs and democrats, not only between States, but between factions within single States, as in the signal instance of Corcyra. Sparta and Athens, the two great powers of Greece, opposed in character, policy and constitution, favoured and protected States in political sympathy with themselves, and sought by supremacy or confederation to advance the political principles which they professed. The overthrow of Persian rule and the rise of Athens to empire promoted the cause of democracy, and before the outbreak of the Peloponnesian War the States of the Delian confederacy were with few exceptions democratic, as the allies of Sparta were with equally few exceptions oligarchic. The war was, in great measure, a struggle between democracy and oligarchy. The decline of Athenian power in the Aegean was followed by the revolt of many allies and the institution of oligarchies in many States: and Lysander used his final victory to establish narrow oligarchies of his partisans (*δεκαρχίαι*) throughout Greece. With the reaction after Cnidus and Leuctra democracy regained ground, and for the time the accession of Thebes strengthened the democratic cause, but after the Social War many States of the Aegean reestablished oligarchy. If we may believe the philosophers, both democracies and oligarchies intensified their characteristics, and the extreme forms (*ὄχλοκρατία* or *δημοκρατία ἐσχάτη* and *δυναστεία* or *ὀλιγαρχία ἄκρατος*) were common. In Sicily the 'new tyranny' arose, a military government, based on military necessities, and in Thessaly, Epeirus and other backward States of Greece certain chieftains established a similar government. In Macedonia, where the vague powers of the king recalled the heroic monarchy, Philip established a domination which united his own land and brought Greece to subjection. The Macedonian monarchs were indifferent to the war of constitutions in the Greek States, but political considerations sometimes caused them to establish oligarchies or tyrannies in their own interest. The break-up of Alexander's kingdom resulted in the establishment of great monarchies, more or less oriental in character. Within Greece Macedonian ascendancy was maintained by tyrants in the different cities; to oppose this subjection, the smaller States sought to gain strength by uniting in confederations, and in the Achaean and Aetolian leagues something resembling federal govern-

Later development of Constitutions.

ment was developed. These leagues lasted until Greece was absorbed in the Roman Empire, after which time the Greek States lost their political importance and enjoyed little more than a municipal independence.

B. ATHENS: HISTORY OF THE CONSTITUTION.

441. Athens and Sparta are the only States of whose constitutions we have a detailed knowledge. Athens pursued a more normal course in the development of her government. Sparta was, in many respects, different in type from the other States of Greece and maintained her old institutions with a rigid conservatism.

The early history of the Athenian constitution is legendary. The Athenians, who counted themselves as belonging to the Ionian stock, claimed to have been undisturbed in their land, and it is probable that Attica escaped conquest by the invaders from the north. The early legends reflect the gradual union of Attica, which was originally divided into a number of independent townships, under the sway of different families. Some of these communities combined in religious leagues, and with the name of Cecrops is associated the union of the inhabitants in twelve πόλεις. We may assume that at some early time smaller communities were grouped round fortified centres, each with its own government of chieftain and council, and that all recognised some common bonds of kinship, although the πόλεις were so far independent as to make war on each other. Ion, who was called in to help the Athenians, was said to have introduced the four Ionic tribes. If, as is probable, each tribe had a local unity, this measure further promoted the union of Attica. The different πόλεις were now grouped in four tribes (φυλαί), of which each was ruled by its φυλοβασιλεύς, while all recognised the authority of a single chief, whose seat was Cecropia, the original city of Athens. The final union of the country (συννοικισμός) was ascribed to Theseus, who put down the separate governments of the different πόλεις, induced the nobles to settle in Athens, and made that city the capital and seat of rule. Theseus was said to have divided the people into three classes, Εὐπατρίδαι, γεωμόροι (also called γεωργοί, ἀγροικοί) and δημιουργοί; classes which probably existed before in the separate πόλεις, and assumed political importance in the new constitution.

Legendary
history of
Athenian
Constitution.

442. The four tribes into which the Athenians were divided, Γελέοντες, Ἀργαεῖς, Αἰγικορεῖς and Ὀπλητες, were found in other Ionian states. Whatever the original meaning of the names we can trace no difference of privilege between the tribes, and probably at an early date all Athenians were admitted to membership of them. Each tribe was divided into three φρατρίαί. The grammarians preserve traditions, which cannot be accepted, that there was a fixed number of γένη,

Tribal
organisation.

thirty to each *φρατρία* and even a fixed number of members in each *γένος*. It is probable that the *γένη* and *φρατρίαι* (which had their origin in kinship) formed religious unions, at first open only to Eupatrids. But at some time before Solon the other classes seem to have gained admission, and the members of the *γένος* (*γεννήται*) included both the original Eupatrid members (*δμογάλακτες*) and those admitted to share in the rites of the *γένος* (*δργεῶνες*). These conclusions are disputed; in any case the early social organisation was aristocratic; and political privileges were dependent upon birth.

443. Of the government in early times we have no detailed knowledge. According to the legends, the kingship, which gradually established its sway over Attica, was not strictly hereditary. Its powers were modified by the institution of other officers and by the *συνοικισμός* attributed to Theseus, by which the Eupatrids settled in Athens as a privileged class. The traditions of the transition from monarchy to aristocracy are not consistent. Aristotle who in some cases based his account on inferences from later institutions, says that the polemarch was appointed (on the coming of Ion) to share the duties of the king. The *βασιλεύς* still continued to be the head of the State and was chosen from the family of the Medontids. Later (according to the traditional chronology in 1090 or 1070 B.C.) the *ἄρχων* was appointed. At first all these magistrates were chosen for life, later in 752/1 their tenure was limited to ten years and in 682/1 to one year. Lastly the board of six *θεσμοθέται* was instituted, six magistrates, chosen like the rest from the rich Eupatrids, 'to record the judgments.' The nine magistrates did not form one college until a later time. The division of power among several magistrates of limited tenure led to the establishment of aristocracy. The Council, which met on the Areopagus, was composed of ex-magistrates sitting for life. It had vague and extensive authority, appointed the magistrates, directed all important matters of administration, exercised a censorship over the citizens, watched over the laws and exercised such judicial functions as were not expressly left to the magistrates. From the great powers thus entrusted to the Council, and from the influence which a body of ex-magistrates sitting for life must possess, we may assume that, as usually happened in aristocracies, the government of the State was centred in the Council. Of other magistrates the *κωλακρέται* were probably an early institution and the *ναύκραροι* are mentioned as existing in the seventh century.

444. Naturally the nobles ruled in the interests of their own order and the classes excluded from the government were oppressed and discontented. The economic changes of the seventh century led to distress and injustice. Most of the land was held by a few rich men; the smaller landowners had fallen into debt and had mortgaged their land, while the poorer peasants were cultivating the land of the rich, and default in payment of the rent reduced

Early government.

Draco and Solon.

them and their families to serfdom, as the debts were secured upon their persons¹. Meanwhile a commercial class must have arisen, excluded from all share in the government. These elements of social and political discontent, and the divisions and rivalries between the great houses prepared the ground for a tyrant. After the attempt of Cylon (between 636 and 624 B.C.) the nobles felt obliged to make concessions, and in 621 Draco was appointed lawgiver. Aristotle (*Ath. Pol.* 4) describes an elaborate constitution as the invention of Draco. This is in conflict with his statement in the *Politics* that Draco only drew up a code of laws, and on other grounds it is doubtful whether the Draconian constitution should not be regarded as the invention of a later age. It is described as entrusting power to all hoplites, it anticipates in many institutions the work of Solon, and contains arrangements of a complex and artificial character, which seem unsuited to a primitive polity. In any case Draco drew up and published a code of laws but made no attempt to heal the social disorders. The necessity for drastic reform was as great as before, and in 594/3 B.C. Solon was appointed *διαλλακτῆς καὶ ἄρχων*, with full power to relieve the social distress and revise the constitution (§ 437). His social reforms (*σεσάχθεια*) cancelled debts and thus cleared the land from mortgages and set free debtors from serfdom; others, who had been sold as slaves, he ransomed from abroad, and he enacted that for the future no one should be allowed to pledge his liberty. Solon then repealed the laws of Draco and proceeded to reconstruct the constitution. He organised the citizens in four property classes (*τιμήματα*), based on the produce of corn, oil or wine from their land. The members of the different classes were called *πεντακοσιομέδιμνοι*, *ἱππῆς*, *ξενύγται*, and *θῆτες*. Only members of the first three classes were eligible for offices of State, only members of the first class for the highest offices. The Thetes, who were exempt from hoplite service, were admitted to the assembly and the law courts, but had no other privilege. Aristotle attributes to Solon the appointment of magistrates by a combination of lot and election (*κλήρωσις ἐκ προκρίτων*). This is difficult to reconcile with other evidence, with other parts of Aristotle's narrative and in itself seems improbable. Solon instituted a new *βουλὴ* of Four Hundred. The Assembly had the decision of war and peace, and perhaps of some other important questions. Solon introduced the right of appeal (*ἔφεσις*) from the sentence of the judicial magistrates to the law court, and this was regarded as his most important democratic institution. The people probably conducted the *εὐθυναί* of the magistrates (§ 453) in the Assembly or the law court. The Council of the Areopagus was left in possession of its extensive powers to watch over the laws and the constitution, to supervise the administration and to exercise a censorship over the citizens. Solon divided each of the four tribes into three *τριτῦες*, and each *τριτῦς* into four *νακκραρίαι*, which formed local administrative units. He drew up a comprehensive code of laws and founded the system of private

¹ They were called *ἐκτῆμοροι*. There is a conflict of evidence and opinion as to whether they paid one-sixth or five-sixths of the produce as rent.

law. He encouraged trade by altering the system of weights, measures and coinage.

445. Solon was often regarded as the founder of democracy and he first gave political rights to the Thetes, but privilege was proportioned to wealth and the aristocratic organisation of the State left great influence with the nobles. His work was a compromise, which left most citizens discontented. Faction ensued, based on the local divisions of plain, shore and hill men (*πεδιεῖς*, *παραλοί*, *διάκριοι*). Each of these divisions was headed by an ambitious noble and the field was open to a tyrant. After three intervals of anarchy Damasias, archon in 582, endeavoured to make his office into a permanent tyranny. On his fall ten archons were appointed, five from the *εὐπατρίδαι*, three from the *γεωμόροι* and two from the *δημιουργοί*. The disorders of the State continued until Peisistratus, the champion of the poor hill men, made himself tyrant in 560. Tyranny lasted, with two interruptions, until 510. After his second restoration Peisistratus established his power and ruled with a wise moderation. The constitution was not changed, but the tyrant took care that the chief offices should be held by his friends. He relied on the support of the commons and his reign was celebrated as the age of gold. He promoted agriculture, undertook great buildings, introduced new religious cults and festivals and secured the support of poets for his dynasty, and extended the power of Athens in the Aegean. Hippias succeeded his father in 527, and after the assassination of Hipparchus became a harsh and suspicious despot, until the Alcmaeonidae, who had been exiled by Peisistratus, gained the support of Sparta and overthrew the tyranny.

446. In the confusion which ensued Cleisthenes, the Alcmaeonid, adopted the cause of democracy, triumphed over his rivals, and in 508/7 B.C. was given authority to revise the constitution. The tyranny had broken the power of the nobles and thus prepared the way for democracy, but the laws of Solon had in great part fallen into disuse. The aim of Cleisthenes was to give free play to the democratic elements in the constitution of Solon, to prevent the domination of the nobles or the usurpation of tyrants. To effect this end, he took measures to abolish the political importance of the old divisions of *φυλαί*, *φρατρίαι* and *γένη* based upon birth, and to substitute new artificial divisions, so arranged as to obviate the possibility of local factions. He enrolled the citizens in ten new tribes, which superseded the four Ionic tribes for political and administrative purposes. Further the whole of Attica was divided into thirty *τριττύες*, ten of which included the city and its neighbourhood, ten the coast and ten the interior. Each tribe was composed of three *τριττύες*, chosen one from each of these sections. Each *τριττύς* contained a number of townships (*δῆμοι*)¹. Both tribes and demes had their own officers and administered their own affairs (§ 452).

¹ There is reason to doubt the statement of Herodotus (v. 69) that there were a hundred demes in all, ten to each tribe. In later times the number was certainly larger.

The tribes served for military purposes, each furnishing contingents of infantry and cavalry; and in the administration of the State, magistrates, appointed in general to form boards of ten, were appointed one from each tribe or one for each tribe. Solon's Council of Four Hundred was increased to Five Hundred, and fifty members were chosen from each tribe. A revision of the roll of citizens (*διαψηφισμός*) is said to have been carried out after the overthrow of the tyrants. Cleisthenes extended the bounds of citizenship by the admission of metics and freedmen. Ostracism (§ 460) was introduced to guard against tyranny (though within a few years it was employed to remove politicians who had no designs against the constitution). It is possible that Cleisthenes made other changes of which we have no record. Aristotle tells us that in 501 the generals were chosen one from each tribe, and the organisation of the board of ten generals (under the chief command of the polemarch) may have been the work of Cleisthenes. The measures of Cleisthenes succeeded in breaking the power of the great families and of local factions, while the new tribes and demes encouraged the citizens to play their part in political life. But the constitution, based on the support of the middle classes, retained many restrictions on full democracy. Property qualifications were required for the higher offices and the Council of the Areopagus still exercised wide powers of control.

447. The victory over Persia, the rise of Athens as a power at sea, her relation to the confederacy at Delos, and the general development of trade and industry strengthened the force of democracy. In 487/6 a combination of lot and election was introduced for the appointment of the archons. This change must have greatly diminished the power and importance of the archons, and it may have been the occasion for the transfer of the chief command to the generals, who in the first half of the century ceased to be tribal officers and became the most important magistrates in the State (§ 456). The Council of the Areopagus was assailed in 462/1, and its powers were transferred to the Council of Five Hundred, the Assembly and the Law Courts. The *γραφὴ παρανόμων* may have been instituted to give to the law courts the duty of controlling legislation: in any case the popular dicasteries gained in power and importance: and, as the dicasts were recruited from all classes, it was natural that Pericles should institute pay for them. The democratic principle of payment for public duties, which tended to equality of privilege between rich and poor, was applied also to the Council, to many of the magistrates, and to citizens serving in the army and fleet. In other ways provision was made for the poorer citizens by the system of cleruchies (§ 548), and by public distribution of corn. In 458/7 the archonship, which had since Solon been opened to the second class, was opened also to the Zeugitæ (the fourth class were never formally admitted to the office, but in later times their disqualification was ignored). It is possible that the introduction of the lot, without preliminary election of candidates, for the administrative (but not for the military) offices

Changes in
the fifth
century.

dates from this time. All citizens were thus given an absolute equality of chance, though *δοκιμασία* (§ 453) was applied to exclude the incompetent. In some respects aristocratic traditions were maintained: men of family filled the boards of generals and played a leading part in politics; and in 451/0 those who could not show descent from citizens on both sides were excluded from citizenship. Pericles, at last left unopposed in the direction of policy and elected general sixteen years in succession, obtained so complete an ascendancy in the State that Thucydides describes the government as the rule of one man. With his death the conditions were changed: men of less ability and of lower social position competed for the favour of the people; the war intensified feeling, and political life became more violent and more vulgar. Cleon, the most prominent of the new demagogues raised the dicasts' pay to three obols, and was probably responsible for the tyrannous raising of the tribute in 425 (§ 513). After the disaster at Syracuse a reaction set in against the democracy. In 413 ten *πρόβουλοι* were elected to supersede, in part, the democratic Council. They prepared the way for the oligarchy of Four Hundred, instituted in 411 and overthrown after a few months' rule. For a brief time a government of mixed democratic and oligarchic elements, with the franchise limited to those who could serve as hoplites, held sway, but in 410 full democracy was restored, and boards of *συγγραφεῖς* and *ἀναγραφεῖς* were appointed to revise the laws. After the disastrous end of the war, the oligarchs with the support of Lysander procured in 404 the appointment of thirty legislators (*συγγραφεῖς*), who, neglecting the purpose of their appointment, established a reign of terror, which caused them in later times to bear the name of the Thirty Tyrants. They were overthrown by the democratic exiles and democracy was restored under the mediation of the Spartan king in 403. The archonship of Euclides in this year marks an era. The revision of the laws then undertaken most probably involved the introduction of some institutions, which cannot be traced before this date, and the constitution, as revised, lasted without serious change until Athens lost her independence.

448. There is no doubt that in the fourth century the constitution,

The constitution in the fourth century.

which was supposed to be a democracy, ruling in accordance with law, became relaxed in its working; that in the age of Demosthenes the people exercised an absolute power in the Assembly and the law courts. The principle of dividing the State revenues among the citizens was extended by the introduction of pay for the assembly and the increase of the theoric distributions (§ 512). The jealousy of the sovereign people was shown by the constant control of the magistrates exercised in the Assembly or the law courts. The responsibility of the individual citizen was enforced by the *γραφὴ παρανόμων*. The power of oratory increased; the demagogue and the professional accuser (*συκοφάντης*) gained in importance, while the citizens, disinclined for military service and relying on professional generals and mercenary armies, were not ready to make the efforts which the pursuit of an independent and

consistent policy demanded. Hence Athens fell inevitably before the organised strength of Macedonia.

449. The Athenians, after Chaeronea undisturbed in their government, provoked interference by revolt. Antipater occupied Munychia with a garrison and limited the franchise to those who had not less than two thousand drachmae. Twelve out of twenty-one thousand lost their political right. In 319 B.C. the Athenians rose and restored democracy, but next year they surrendered to Cassander, when the franchise was limited to those having not less than one thousand drachmae. Demetrius Phalereus, entrusted with the control of the city, allowed the forms of democracy to remain but instituted the important board of seven νομοφύλακες, who controlled the Council and Assembly as well as the magistrates, whose number and importance were diminished. He also reformed the judicial system and superintended the finances. In 307 Demetrius Poliorcetes delivered Athens and restored her democracy, but in 295 he found it necessary to control the Athenians by garrisons. Athens made several attempts to recover her freedom, and in 229 with the help of Aratus she got rid of the Macedonian garrisons, but refused to join the Achaean league, seeking support from Egypt, Pergamum and Rhodes. The relation of Athens with other powers was reflected in the honours paid to foreign monarchs. In 307 two new tribes were created called Antigonis and Demetrias, in honour of the Macedonian king and his son. It was probably after the liberation of Athens that a thirteenth tribe, the Ptolemais, was instituted in honour of the Egyptian king. When Rome took up arms against Macedonia in 200 the Athenians abolished the Antigonis and Demetrias, but instituted a twelfth tribe, the Attalis, in honour of the Pergamene king. Almost from the first the Athenians declared for Rome, and in 146 B.C. Athens became an autonomous *civitas foederata*. Her independence was however little more than municipal, and, though the forms of the democracy survived, Rome, provoked by the accession of Athens to Mithradates and later to the cause of Pompey, strengthened the aristocratic elements in the constitution. The στρατηγὸς ἐπὶ τὰ ὄπλα absorbed the powers of all the generals and, with the chief archon, ranked as an eponymous magistrate. His duties were connected with the peaceful administration of the State, the corn supply and the studies of the ἔφηβοι. The archons ranked as the highest officials. They were elected, and even foreigners such as Domitian and Hadrian held the office of ἀρχῶν ἐπώνυμος as a mark of honour. Four ἐπιμεληταὶ τῶν δικαστηρίων presided over the judicial administration. The Council (whose numbers varied at different times from three hundred to seven hundred and fifty) was appointed by lot. It was superseded in importance by the Areopagus, which, recruited from the elected archons, had an aristocratic character and was entrusted with wide powers. From the time of Hadrian an imperial curator (λογιστής) superintended the finances. The shadow of the old constitution lingered on and Archons and Areopagus survived the fall of the Roman Empire.

Athens under
the Macedo-
nians and
the Romans.

C. ATHENS: THE CONSTITUTION IN ITS DETAILED ORGANISATION.

Aristotle's systematic account of the constitution (*Ἀθηναίων πολιτεία* cc. 42 ff.) refers to the Athens of his own day, and our knowledge of constitutional details is generally fuller for the fourth century than for any other period. The following account deals therefore with the constitution in its fullest development, though many of the institutions doubtless dated from the reforms of Cleisthenes, and much that is said will therefore apply equally to the fifth century.

450. Besides citizens, the population of Athens included resident aliens and slaves (§§ 534 ff.). The resident aliens (*μέτοικοι*) were encouraged to settle in Athens, on account of the part which they took in trade and industry, and the service which they performed in the fleet. A metic had to register himself with a citizen as his *προστάτης*, who, in some degree, represented him in the law courts, and otherwise protected his interests. The metic paid a special tax of 12 drachmae a year (*μετοίκιον*), and was liable also to the taxes which fell upon citizens, to the *εἰσφορά* indeed at a higher rate. He might by special privilege be ranked with the citizens for purposes of taxation (*ἰσοτελής*) or even be granted the right, otherwise restricted to citizens, of owning land and houses in Attica (*ἐγκτησις γῆς καὶ οἰκίας*). The metics were liable to military service.

451. Citizenship was derived by birth or creation. Foreigners who had deserved well of the State might be given citizenship by vote of the Assembly (*ποιοῦτοί, δημοποῖητοί*). Citizenship by birth in the strict theory of the constitution required descent from citizen parents on both sides. This condition, relaxed in practice at different periods, was asserted by laws enacted or revived on several occasions, when a revision of the citizen roll (*διαψήφισις*) in accordance with this principle was carried out. The child was at an early age enrolled in his father's *φρατρία*. In his eighteenth year he was admitted to his father's deme and then enrolled in the *ληξιαρχικὸν γραμματεῖον*. For two years he ranked among the *ἐφηβοί* and went through a course of military training under the discipline of elected officers (*σωφρονισταί* and *κοσμηταί*). In his twentieth year he was enrolled on the *πίναξ ἐκκλησιαστικός* and entered on the full rights of citizenship (*ἐπιτιμία*), so far as these did not depend on conditions of age.

452. The old corporations, superseded politically by the reforms of Cleisthenes (§ 446), continued to exist for religious purposes. The Ionic tribes, four in number, each headed by a *φυλο-βασιλεύς*, retained a ceremonial character. The *φρατρίαι*, in which all citizens were enrolled, headed each by a *φρατρίαρχος*, held assemblies (*ἀγοραί*) and passed decrees. More important was the political

Religious
and political
corporations.

organisation of the State in demes and tribes. The demes were local divisions of the city or the country districts of Attica; some bore place-names (as Acharnae, Eleusis, Marathon), others patronymics (as Butadae, Cothocidae). Originally the residents in each deme were enrolled as members (*δημόται*); but as membership was hereditary a man might belong to a deme in which he did not reside. Men owning property in demes to which they did not belong were called *ἐγκεκτημένοι* and paid a tax *ἐγκτητικόν*. The deme had its own magistrates, of whom the *δήμαρχος* was the most important, and its assembly (*ἀγορά*), which maintained local cults, passed decrees and administered its property. The demes served also for various purposes of State: they formed the units from which the men for the army and the fleet were raised, and candidates for membership of the *βουλή* were chosen from the demes in proportion to their population. The demes were combined in thirty Trittyes, and each tribe (*φυλή*) was composed of three Trittyes. From the time of Cleisthenes to the year 306 B.C., there were ten tribes, which were named after Attic heroes and arranged in the following order: Erechtheis, Aegaeis, Pandionis, Leontis, Acamantis, Oeneis, Cecropis, Hippothontis, Aeantis, Antiochis. Other tribes were instituted at later epochs in honour of foreign princes (§ 449). The eponymous heroes had their temples and special cults. The tribes were entrusted with self-government: at the head of each tribe were the *ἐπιμεληταὶ τῆς φυλῆς*, elected every year, who controlled the administration, managed the property with the aid of a *ταμίας*, and called assemblies of the tribe (*ἀγοραί*). These assemblies passed decrees, appointed *χορηγοί* and *γυμνασάρχου*, and elected magistrates such as *τεichoποιοί* and *ταφροποιοί*, who superintended the share of the public works that fell to each tribe. The tribes were important political divisions: the Council was formed of ten *πρυτανεῖαι*, one from each tribe, almost all magistrates formed boards of ten, appointed one from or one for each tribe. Each tribe supplied contingents of cavalry and infantry, commanded by *φύλαρχοι* and *ταξίαρχοι*.

453. The organs of government were the Magistrates, the Council of Five Hundred, and the People (exercising its power in the Assembly or the Law Courts). The principles of democracy were realised in the general rules affecting the magistrates. With few exceptions the administrative magistrates were appointed by lot and for a single year and a second appointment to the same office was forbidden. The multiplication of magistrates ensured at once the admission of a large number of citizens to office and prevented the officials from becoming too powerful. The control of the executive by the people was enforced by the scrutiny of candidates before they entered on their duties (*δοκιμασία*), by the review of their conduct while in office (*ἐπιχειροτονία*), and by the strict audit and account to which they submitted on retiring (*εὐθυναί*). The generals and other military officers, certain of the more important financial officers as well as the

Magistrates
in general.

officials of the tribes and demes, were appointed by vote (*χειροτονητοί* or *αίρετοί*), the rest were appointed by lot (*κληρωτοί*). Magistrates were appointed in the early spring, and entered office at the beginning of the Athenian official year in July. The interval allowed time for the *δοκιμασία*, which, in the case of the archons, took place first before the *βουλή*, then before a law court, and, in the case of other magistrates, before a law court only. The scrutiny was partly concerned with the formal qualification of the candidate, but it was open to any citizen to bring an accusation against a candidate and secure his rejection. On entering office the magistrates took an oath. During their term magistrates were liable to be suspended and deposed. At the *κυρία ἐκκλησία* of every Prytany (§ 460) a vote on the conduct of the magistrates was taken (*ἐπιχειροτονία*): if the vote were unfavourable (*ἀποχειροτονία*), the magistrate was suspended and brought to trial. On retiring from office all magistrates had to render account of any funds administered by them as well as to submit their official conduct to review (*λόγον καὶ εὐθύνas διδόναι*). The officials concerned with this examination were the *λογισταί*, *συνήγοροι* and *εὐθνοί*, each board ten in number and appointed by lot. The magistrates had to receive their discharge from a jury court, where the process must have been summary and in most cases formal, but the *λογισταί* might lay a specific charge against them or any citizen might proffer an accusation, in which event a regular trial took place. Most of the magistrates formed boards of ten, and it was probably usual that one of their number should act as president (*πρύτανις*), whether by rotation or by special appointment. Subordinate officials, such as treasurers (*ταμίαι*), secretaries (*γραμματεῖς*), and heralds (*κήρυκες*), were attached to most boards. To enforce their authority and punish offences within their own sphere of duty magistrates generally were qualified to impose fines to a limited amount (*ἐπιβὰλῃς ἐπιβάλλειν*) or to bring the accused directly before a law court in which they presided (§ 482).

454. For the offices appointed by lot a preliminary selection was first made by lot in each tribe among those who offered themselves as candidates, and from the men thus chosen the final appointment was made by lot. To provide for the death of a candidate or his possible rejection at the *δοκιμασία* reserve candidates were chosen (*ἐπιλαχόντες*). Of the administrative magistrates the nine archons were first in dignity and importance. With the secretary of the Thesmothetae they formed a board of ten and were chosen one from each tribe. At the end of their term they became members of the Council of the Areopagus (§ 459). Collectively they took part in the appointment of magistrates by lot and the allotment of dicasts to the *δικαστήρια*. For the most part the duties of the Archon, the King, the Polemarch and the Thesmothetae were separate, and were mainly judicial or religious. The chief archon (*ὁ ἀρχων*) was the formal head of the State, his name serving to date the year in muster rolls and decrees. He conducted the

The
Archons.

Great Dionysia and some other festivals, assigning choruses and appointing χορηγοί. His judicial duties were connected with the law of the family (§ 482). The King (ὁ βασιλεύς) was the religious chief of the State, superintending the Mysteries, the Lenaea, and the torch race. His judicial duties included cases of a religious character and he presided over trials for homicide (§ 491). The Polemarch (ὁ πολέμαρχος) had lost his position as commander-in-chief. He conducted certain ceremonies and sacrifices, and presided over lawsuits in which non-citizens were concerned (§ 482). The duties of the six junior archons (οἱ θεσμοθέται) were exercised collectively and were almost exclusively legal or judicial. They had a general superintendence over the law courts, and they presided in many public and in some private trials (§ 483), and they were concerned with the revision of the laws.

455. The Eleven (οἱ ἕνδεκα), chosen one from each tribe with a secretary, were police magistrates, having jurisdiction over malefactors and looking after the prison. The duties of judicial and administrative of the minor magistrates (all of whom were arranged in boards of ten) are sufficiently implied in their names, ἀστυνόμοι, ἀγορανόμοι, μετρονόμοι, σιτοφύλακες, ἐμπορίου ἐπιμεληταί. Of magistrates appointed to control public works (ἐπιστάται τῶν δημοσίων ἔργων) five ὁδοποιοί and ten ἱερῶν ἐπισκευασταί were appointed by lot, while the more important office of superintending the water supply was held by one man (κρηνῶν ἐπιμελητής) elected by the people, as were such extraordinary officers as the ἀποστολεῖς, who superintended the despatch of a fleet, σιτώναι, who purchased corn for the State in time of famine, and the ζηηταί, commissioners to undertake a special inquiry, such as were appointed after the mutilation of the Hermae.

Other administrative magistrates.

For religious duties there were many boards of magistrates such as the ἱερεῖς, the ἱεροποιοί and ἀθλοθέται, the ἐπιμεληταί τῶν μυστηρίων and the ἐξηγηταί, as well as many menials attached to the different temples.

Religious magistrates.

For the financial magistrates see § 518.

456. The most important officers in the State were the ten generals (στρατηγοί). Appointed originally to command the contingents of the tribes, they were elected by the tribes, but when, in the fifth century, the chief command passed to them from the polemarch they were elected from all the citizens, but with such regard to the tribes that there were rarely two generals elected from the same tribe. It does not seem likely that there was any regular division of duties or difference of rank between them in the fifth century, although it was usual for the assembly to nominate particular generals for each expedition and to determine which of them should hold the command-in-chief. The superior power thus given is implied in the phrases ὁ δεῖνα τρίτος... αὐτός or ὁ δεῖνα καὶ οἱ συνάρχοντες. Further one general might be given a position which raised him above all his colleagues (στρατηγὸς δέκατος

Military magistrates.

αὐτός). Occasionally extraordinary powers were conferred on generals, which enabled them to act independently of their colleagues, or, to some extent, of the Council and Assembly (αὐτοκράτορες). It is thus obvious that there were means within the constitution of conferring great executive power on a magistrate, who gained the confidence of the Assembly. Pericles and Alcibiades are both described by Thucydides as entrusted with full power in the State. At some time in the fourth century a division of duties was introduced, and when Aristotle wrote, five of the generals had specific functions, the στρατηγὸς ἐπὶ τὰ ὄπλα holding the first place on the board and commanding on active service.

The normal powers of the generals were at all times great and extensive. They were not merely commanders-in-chief, they controlled the military and naval administration, provided for the defence of the land and the provisioning of the city. They conducted the levy, nominated trierarchs and superintended the raising of the property tax, and presided in suits connected with these duties as well as in trials for military offences. As the chief magistrates they took a prominent part in negotiations and in the ratification of treaties with other States. They had a right of access to the Council and could submit motions to be brought before the Assembly (γνώμη στρατηγῶν). They could get extraordinary meetings of the Assembly summoned by the prytaneis, and in all Assemblies they could claim precedence for their proposals. Subordinate to the generals were the ten ταξίαρχοι, each commanding the infantry contingent of his own tribe. Below them ranked the λοχαγοί. The cavalry was commanded by two ἵππαρχοι, with φύλαρχοι and δεκάδαρχοι subordinate to them. The ships of the fleet were each assigned to a trierarch, a rich citizen called upon to undertake the duty, who prepared the ship for service and commanded it in war (§ 516).

457. The Council from the time of Cleisthenes contained five hundred

The Council
of the Five
Hundred.

members, and its full official title was ἡ βουλὴ οἱ πεντακόσιοι. Every citizen over the age of thirty was eligible, but no one might serve on the Council more than twice. The coun-

cillors were appointed by lot, fifty from each tribe, and were so chosen that the demes composing each tribe had a number of candidates proportionate to their population. The Council was thus representative of the different districts of Attica, and the balloting for candidates in small communities like the demes left room for intrigue on the part of those who desired a seat on the Council. Reserve candidates were chosen (ἐπιλαχόντες). The councillors designate submitted to a δοκιμασία before the old Council: in case of rejection an appeal to the law courts was allowed. The councillors entered office just before the beginning of the official year and took an oath. During their term they were exempt from military service and received pay; and on leaving office they were individually liable to render account (εὐθυναί).

The numbers of the Council made it desirable to have some smaller body

which would always be accessible. Hence the fifty councillors of each tribe formed standing committees (*πρυτανείαι*), each acting for a tenth of the year in an order settled each year by lot. The members (*πρυτάνεις*) met every day in the *θόλος*; they received foreign envoys, despatches from officials or foreign States, and informations of serious offences. They prepared business for the Council, and, by means of a written *πρόγραμμα*, summoned both Council and Assembly. A president (*ἐπιστάτης τῶν πρυτάνεων*) was chosen by lot every day to hold office for a single day and night, during which time he remained in the *θόλος* with a third of the *prytaneis* chosen by himself. He kept the keys of the State treasury and archives and the State seal, and in the fifth century he was the actual president both in Council and Assembly, the *prytaneis* helping to maintain order. In the fourth century a change (first traceable in 378/7 B.C.) was introduced. Before every meeting of either Council or Assembly the *ἐπιστάτης τῶν πρυτάνεων* drew by lot from the councillors of the nine tribes not forming the *prytany* nine *πρόεδροι*, who maintained order, brought forward business and counted the votes in the Council or Assembly. From their number one was chosen as president (*ἐπιστάτης τῶν προέδρων*). The Council, summoned by the *πρόγραμμα*, met on all days that were not festival or unlucky, usually in the *βουλευτήριον*. The sittings (*ἔδραι*) were usually public, but private citizens (and magistrates other than the generals) could only address the council if introduced or called upon to do so.

458. The Council had extensive powers, deliberative, executive and administrative, but aliké from its constitution and from its real subordination to the Assembly, its independent authority was not great. As a deliberative body it prepared all business for consideration in the assembly (*προβουλεύειν*), and it was unconstitutional for any business to be submitted to the vote of the people, before it had been discussed in the council and formally entered on the *πρόγραμμα*. As an executive body it had a limited power of fining and could pass decrees of honour, but the Assembly, after deciding on a course of action, often delegated the execution to the Council, which appointed special commissioners for the purpose. The administrative powers of the Council were most important. Aristotle asserts more than once that the Council shared with the magistrates the general administration of the State. It exercised some control over the magistrates, especially over those who had public monies in their hands; it took part in the *δοκιμασία* of the archons and of the candidates chosen for the new Council. It looked after the building and the repair of the fleet, reviewed the cavalry, inspected public buildings, and took a most active and important part in financial business (§ 517). In the sphere of religion it had the supervision of sanctuaries, festivals and ceremonies. It gave audience to foreign envoys and swore to treaties and alliances. In the fifth century it was concerned also with the control of the Delian confederacy. It took part in legislation (§ 462), and it had certain judicial

Powers of
the Council.

functions (§ 489). Certain officials were appointed by the Council from its own members to discharge special duties, ten λογισταί to receive the accounts of magistrates in every prytany, a γραμματεὺς τῆς βουλῆς, and in the fourth century a second γραμματεὺς ὁ κατὰ τὴν πρυτανείαν, responsible for the drafting and inscription of decrees and the keeping of the archives, and two ταμίαι to look after the funds of the Council.

459. The Council of the Areopagus, officially termed ἡ βουλή ἡ ἐξ Ἀρείου πάγου, was composed of ex-archons, admitted on passing their εὔθυναί, and subject to a δοκιμασία before the Areopagus. Archons during their year of office seem provisionally to have been allowed seats on the Council. The members sat for life, but were liable to εὔθυναί. The sittings of the Council were private. In earlier times it had important political powers, which were taken from it by the reforms of Ephialtes and Pericles; it retained a certain supervision in matters of religion and important judicial duties (§ 491), and it was sometimes commissioned to conduct judicial investigations in the case of grave crimes (as after Chaeronea and in the affair of Harpalus). At particular crises it was given political authority, as at the end of the Peloponnesian War. From the end of the fourth century its powers were gradually extended, and in the time of the Roman supremacy it was an important organ of government.

460. The Athenian people (ὁ δῆμος, τὸ πλῆθος τῶν Ἀθηναίων) exercised a direct sovereignty. Administrative and executive functions were of necessity delegated to magistrates or Council, but both authorities were jealously controlled. The powers of the Assembly (ἐκκλησία) were indeed limited by the law courts, which exercised a final decision on changes of law and a power of revision over the decrees of the Assembly (§ 461): but this was no derogation from the supremacy of the people. For the dicasts were regarded not as magistrates but as citizens assembled for special duties, acting as irresponsibly as in the Assembly but with different procedure. With this qualification the Assembly had unlimited powers, and settled matters of policy or administration by discussion and vote. The decision of war, peace, treaties and alliances, the election of generals and other military officers, the assignment and despatch of forces, the conduct of military operations, the raising and the apportionment of funds, were all within its province.

All citizens of age and in possession of their civic rights were qualified to take part in the Assembly: usually only a small proportion actually attended, composed in the main of the poorer classes living in or near the city. Four regular meetings were held in each prytany and extraordinary meetings (σύγκλητοι) were called, when they were required. In the fifth and fourth centuries B.C. the Pnyx was the usual meeting-place, except for νόμοι ἐπ' ἀνδρά, for which the ἀγορά was used. The meetings were summoned by the prytaneis, who for the ordinary meetings published a πρόγραμμα five days before. Extraordinary meetings were called in

emergencies by a trumpeter. Six *ληξίαρχοι*, assisted by thirty *συλλογείς τοῦ δήμου*, controlled the attendance. Pay for the Assembly was introduced, probably early in the fourth century: at first one obol, it was soon raised to three, and in Aristotle's time it was actually one and a half drachmae for the *κυρία ἐκκλησία* and one drachma for the other meetings. At the first Assembly of each *prytany* (*κυρία ἐκκλησία*) the *ἐπιχειροτονία* of magistrates took place (§ 453), the provisioning and security of the State was considered, and formal notice of certain judicial proceedings was given. The business of the other three ordinary meetings was also prescribed.

The Assembly opened with sacrifice and prayer: the presidents brought forward the business on the *πρόγραμμα*. On each question the *προβούλευμα* of the Council (§ 458) was read out by the herald. The *προβούλευμα* might contain a definite proposal, might offer alternative courses or might serve simply to introduce the business for consideration. A preliminary vote (*προχειροτονία*) was taken to decide if the *προβούλευμα* should be accepted as it stood or discussed. If it were not immediately accepted the herald asked *τίς ἀγορεύειν βούλεται*; Naturally the proposal of the Council would find advocates, but anyone could propose to reject or amend it, or could make counter proposals. All proposals had to be put in writing. It was also open to a citizen to bring forward some subject which had not been considered by the Council. If the Assembly approved, the subject was referred to the Council, which was directed to prepare a *προβούλευμα*. When the discussion was concluded, the citizens voted by show of hands (*χειροτονία*). At the conclusion of the business of the day the Assembly was dissolved, in rare cases it was adjourned until the next day. In case of unfavourable signs from heaven (*δισσημίαι*), earthquakes, eclipses or even rain, the session was suspended. For *νόμοι ἐπ' ἀνδρῶν* (*δοσρακισμός, εἰσαγγελία, ἄδεια* and grant of citizenship) a quorum of six thousand was required, and voting took place by ballot. In the *κυρία ἐκκλησία* of the sixth *prytany* every year a vote was taken whether recourse should be had to ostracism. If the Assembly so decided, in the eighth *prytany* an extraordinary Assembly was called in the *ἀγορά*, when the citizens wrote on potsherds the name of the man they wished to ostracise. If six thousand voted in all, the man against whom a majority of votes was cast had to leave Athens for ten years. Although the preliminary vote was taken every year in the time of Aristotle, the last instance of ostracism recorded is that of Hyperbolus in 417 B. C.

461. Besides the purely judicial functions of the dicasts (§ 487) they had other duties, which, if judicial in form, had great constitutional importance. Their control over the magistrates by *δοκιμασία, ἐπιχειροτονία* and *εἵθυναί* has been already mentioned: they were also the ultimate authority in legislation. Further, it was a principle of the constitution that the decisions of Council or Assembly should conform to the laws of the State, and so far as they did not do so they were liable to be quashed. The *γραφὴ παρανόμων*, the safeguard of the constitution in the fifth as well as in the fourth century,

Constitutional position of the law courts.

could be brought against any law or decree, on the ground that it conflicted with some law still in force. The citizen bringing the suit made a *ὑπωμοσία*, which had the effect of suspending the force of the law or decree until the trial, which took place before the court of the Thesmothetae. Aristotle tells us that a law could be attacked merely as inexpedient, but, even in the case of decrees, although the legality of the form or substance was the issue, it was impossible to exclude arguments based on expediency, and the widest license was allowed in practice.

462. The Assembly was competent to pass decrees (*ψηφίσματα*), which must conform to the existing laws (*νόμοι*), but a special procedure was adopted for legislation. In earlier days lawgivers such as Solon and Cleisthenes were appointed to draft reforms, which were presumably accepted by the Assembly. In the fifth century legislative commissions (*συγγραφεῖς*) were, on occasion, appointed to frame proposals, which were then referred for ratification to the Council and Assembly. In the fourth century we find a formal and elaborate procedure in force, the clearest idea of which we gain from Demosthenes in *Timocratem* §§ 20—33. Once a year in the *κυρία ἐκκλησία* of the first prytany (which was always held on the 11th Hecatombaeon) the laws were passed in review (*ἐπιχειροτονία νόμων*). If any laws were challenged and if the assembly voted provisionally for reform, definite proposals were drafted by the citizens interested, published (with a copy of the existing law) and handed in writing to the *γραμματεὺς τῆς βουλῆς* to be read to the Assembly. At the fourth assembly of the prytany, after consideration by the Council, the Assembly voted for the appointment of *νομοθέται*, who seem usually to have been a thousand in number and were chosen by lot from the dicasts. The assembly appointed five *σύνδικοι* to defend the existing laws. With the *νομοθέται*, presided over by *πρόεδροι* with an *ἐπιστάτης*, as if they were a deliberative body, the final decision lay. After speeches on both sides the *πρόεδροι* put the question whether the old law should stand, or the new law supersede it (*διαχειροτονία*), and the vote of the majority decided the issue. Even if the new law was carried, it was liable to the *γραφὴ παρανόμων*, not merely on grounds of informal procedure, but even on the broad issue that it was inexpedient. Apart from the proposals of private individuals, it was the duty of the Thesmothetae every year to see whether there were contradictions or other anomalies in the existing laws, and if they so determined, to propose and publish amendments, which were submitted in the same manner to the vote of the *νομοθέται*.

D. THE SPARTAN CONSTITUTION.

463. While Athens presented in her constitution a type of rapid and complete development, Sparta was celebrated for her conservative adherence to old traditions. Secluded from the rest of Greece, untouched by the influences which elsewhere produced Hellenism, Sparta maintained for centuries her primitive order. Her institutions, based on the domination of a conquering race, had some parallels in other States: in some respects, and above all in her long continuance of the military system and of her empire, Sparta was unique. While other Greeks admired the stern consistency of her traditions, they knew little of her constitution in its working, and as Sparta had no literature, we have to rely on the vague idealisations of writers like Xenophon and Plutarch, corrected by the less favourable account of Aristotle in the *Politics*.

The legends traced the origin of the State to the invasion of the Dorians, a hardy race of warriors from the north, who conquered the previous inhabitants. The struggle was protracted, until in the eighth century B.C. the conquered were reduced to submission and the rulers concentrated themselves in Sparta, an unfortified city in the plain of the Eurotas, from which, as from a camp, they ruled their dominions and extended their conquests. Tradition from the time of Herodotus made Lycurgus the author of the constitution. Diverse accounts of his descent and of his date have led some modern writers to disbelieve in the reforms or even the existence of Lycurgus, but it is not improbable that in the long struggle the Dorians found in Lycurgus a leader who reorganised their military power, perhaps introduced their peculiar system of training and society (*κόσμος*), and adapted their existing polity to the necessities of sovereignty over a subject population. Plutarch quotes the so-called *ρήτρα*, which Lycurgus is said to have received from Delphi. It is an archaic ordinance, which enumerates the different elements in the Spartan constitution, the *ἀρχαγέται*, *γερονσία* and *ἀπελλά*, and asserts the sovereignty of the *δᾶμος*. Two changes were ascribed to the reign of Theopompus (c. 750 B.C.): the first, by an addition to the *ρήτρα*, diminished the powers of the Assembly by giving the kings and the Senate power to set aside any 'crooked' decision of the people: the other instituted the ephors, but this tradition is doubtful, and their origin is attributed by Herodotus to Lycurgus. Henceforth the development of the constitution was arrested; a *ρήτρα* of Lycurgus was said to have forbidden the use of written laws, and the Spartans depended on traditional observances (*νόμιμα*) and prided themselves on the immunity of their constitution from change or revolution. Their institutions, unchanged in form, survived long after they had ceased to correspond to the real forces or needs of the State: and to this cause we may trace the rapidity of Sparta's fall, after the first impulse was given.

History of
the constitu-
tion.

464. The division of classes was a result of the original conquest. The population consisted of Σπαρτιᾶται, the ruling class, περίοικοι, a class free but in political subjection, and ἔζλωτες, serfs attached to the soil (§ 532). Foreigners were debarred from settling in Lacedaemon by ξενηλασίαι, and bought slaves were rare. The perioeci, who must have far outnumbered the Spartiates, dwelt in the small towns of the uplands and coast districts of Laconia and Messenia. Besides cultivating their own land they carried on trade and industry, which were forbidden to the Spartiates. They served in the Lacedaemonian armies as heavy armed troops, and in the fleet, and were sometimes entrusted with the command of divisions. They paid tribute from their lands to the kings (βασιλικὸς φόρος), and though they were probably left free in the administration of their towns they had no political rights, and were subject to the arbitrary control of the ephors (who could put them to death without trial), and perhaps also to the supervision of Spartan officials called ἀρμοσταί. Their feelings towards their rulers tended to an increasing dislike and disloyalty.

465. The ruling class bore the name of Σπαρτιᾶται to distinguish them from their subjects, while οἱ Λακεδαιμόνιοι (used sometimes to include Spartiates and perioeci) denoted the State. Originally the Dorian invaders had taken possession of the fertile plain of the Eurotas, and are said to have divided it in lots (κλήροι). Plutarch's statement that there were after the conquest of Messina nine thousand lots, is the invention of a later time (§ 527). The lots, which were cultivated by Helots, formed at once the privilege and the qualification of citizenship: for the revenue from his κλήρος enabled the Spartiate to contribute to his mess and perform his duties in peace and war. The sale of the lot was forbidden. The theory of the State implied equality of property among the Spartiates, but from early times there were rich and poor among the citizens, and the law forbidding the possession of gold and silver was broken and ignored. It has been thought that there was a class of nobles, but the καλοὶ κάγαθοί (§ 467) seem to have been men superior in dignity rather than privileged by birth. Citizenship required, besides descent from citizens, participation in the system of training and contribution to the messes (§ 471). Those who fulfilled these duties were called 'peers' (ὄμοιοι), while those who failed to do so and lost their political rights seem to have been called ὑπομείονες. The division of the citizens is obscure. It is usually assumed that the Spartiates were divided into the three Dorian tribes (Υλλεῖς, Δυμᾶνες and Πάμφυλοι), which were found in other Dorian States as well as in Spartan colonies, and the twenty-seven φρατρίαι mentioned by a late writer may have been subdivisions of these tribes. There were also five local tribes, taking their name from the five villages, which made the town of Sparta, subdivided into ὠβαί.

466. The constitution recalled the heroic age in the division of authority

between kings, Council and Assembly. It had, however, special characteristics of its own. Ancient writers were in doubt how to describe it, as it was regarded as combining different elements—monarchic, aristocratic and democratic. In the spirit of its administration and in the real powers exercised by the Spartiates in the Assembly, or by means of their representatives the ephors, we must rank the constitution as an aristocracy of birth.

From the earliest times there were two kings (*ἀρχαγέται*), from the two dynasties of the Agiadae and Eurypontiadae, each of which traced descent from Heracles. The origin of the double kingship, ascribed by legend to the division of authority between the twin sons of Aristodemus, may have been due to the rival claims of different houses, or possibly to the union of two Dorian communities, in which both chieftains, like Romulus and Tatiush, retained their sway. The kingship bore an heroic character, and originally the kings must have enjoyed the dignity of the Homeric monarchs as priests, judges and generals. In the sphere of religion the kings offered sacrifice for the State and held certain special priesthods, while each selected two *Πύθιοι*, as envoys to the Delphic oracle, which was always in close sympathy with Sparta. In judicial affairs most of the civil jurisdiction had passed to the ephors, but Herodotus tells us that the kings decided disputes about heiresses, adoption, and public roads. The kings commanded the army in the field, and originally they could make war on whom they wished, and the command was shared between them: from the end of the sixth century the right of declaring war passed to the Assembly, and it was ordained that only one king should take the field. The king's power of command was absolute, but he was usually accompanied on a campaign by two ephors, and he might subsequently be called to account. The kings had seats on the Senate, and probably at first presided in both Senate and Assembly, until the duty passed to the ephors. Special honours and privileges were accorded to the kings and certain revenues and perquisites assigned to them. The kingship involved more honour than power. Aristotle describes their office as an absolute generalship held for life: their authority was limited by the other powers of State, such as the Senate and the ephors, with whom they had to exchange oaths every month (§ 469).

Further, their power was weakened by division. One king could not act against the veto of the other, and it was regarded as salutary to the State that the kings should be at discord. Naturally the influence of a king depended in great part on his individual character. Agesilaus directed the policy of Sparta throughout his reign; but the State was fearful of tyranny, and retained the power of controlling and deposing the kings.

467. The kings were assisted in the government by a Council of elders (*γερουσία*). This Senate consisted of the two kings and twenty-eight members over sixty years of age, who held office for life and were irresponsible. They were chosen from the

The Kings.

Senate.

καλοὶ κάγαθοί (§ 465) by a process, in which the shouts of the people in the Assembly decided the election. As the method of their appointment left room for intrigue, so their irresponsible tenure made them liable to corruption. The two kings, if absent from the meeting, could vote by deputy. The ephors probably presided. The Senate deliberated on all important business and prepared questions for the consideration of the Assembly, whose decisions it was competent, in conjunction with the kings, to set aside. It acted also as a criminal court, before which even the kings could be brought to trial. In general it had large and probably undefined powers, and Plutarch says it checked at once the absolutism of the kings and the independent action of the Assembly.

468. The Assembly (*ἀπελλά*), which resembled in functions and procedure the Homeric *ἀγορά*, in accordance with the *ῥήτρα*,
 Assembly. met every month between Babyca and Cnaceum (within the precincts of Sparta). All Spartiates over thirty years of age might attend. Originally the kings, later (before the fifth century) the ephors, summoned and presided over the meetings. The Assembly was only competent to express its opinion on proposals previously considered by the Senate or the ephors, and discussion seems to have been usually limited to kings, ephors and senators. Votes were given by shouting, in case of uncertainty by formal division. The Assembly elected magistrates and senators, decided disputed succession to the throne, voted on peace, war, alliances and other questions of foreign policy, determined which king should take the field on a campaign, and decreed the emancipation of Helots. No doubt any proposed change of law was submitted to the assembly, but legislation was rare at Sparta. The authority of the Assembly was diminished by the addition to the *ῥήτρα*, empowering the kings and Senate to set aside any of its decisions: but the Spartiates at any rate enjoyed greater influence than the commons in the Homeric assembly, and they were further compensated by the powers wielded by the ephors, whom they elected to represent them.

469. The legends are at variance about the origin (§ 463) and the
 Ephors. original duties of the ephorate; the institution was at least as early as the eighth century B.C., and probably from the first the ephors had important powers. The ephors, five in number, were elected yearly from all Spartiates (by a 'childish' process, perhaps similar to that employed for the choice of senators), and entered office at the beginning of the Spartan year (about the autumn equinox). They had a common dwelling-place, and acted collectively in accordance with the votes of the majority. One of their number presided over the board and gave his name to the year. On entering office they issued a proclamation to the Spartiates, *κείρεσθαι τὸν μύστακα καὶ προσέχειν τοῖς νόμοις*. The archaic character of this proclamation makes it likely that from the first the ephors were concerned with the maintenance of discipline over the Spartiates;

they seem moreover to have represented the rights of the Spartiate body as against the kings, at whose expense their powers were subsequently increased. In conjunction with the Senate they had practical control of the government: it was a tradition that when the kings were at variance, the ephors should decide. They wielded the most important executive authority in the State: they summoned and presided in Senate and Assembly, in foreign affairs they negotiated with the envoys of other States and introduced them before the Assembly, whose decrees on war, peace or alliance they carried into effect. In the event of war, the ephors called out the troops (*φρουρὰν φαίνειν*), stating the years required for service, and ordered the despatch of the army. Two ephors accompanied the king in the field to observe and report on his conduct. As the maintainers of the State discipline (*κόσμος*) the ephors had supervision not only over Helots and Perioeci, but also over Spartiates. They superintended the education of the young, and they had general powers of control and punishment over the citizens, which extended to other magistrates and even to the kings. They could suspend, arrest and bring to trial the other magistrates, who were also accountable to the ephors at the end of their term. The limitation of the kingship was expressed in the oaths exchanged between kings and ephors every month, the kings swearing to observe the laws and the ephors guaranteeing their power on this condition. The kings were bound on the third summons to appear before the ephors, who had a general right of control over their life and conduct. They presided in State trials before the Senate, where even the kings might be prosecuted, and they executed the sentence. They had general powers of civil jurisdiction. Their direction of policy, their control of all ranks, their executive power gave the ephors a position, which, modified though it was by the limitation of their tenure and the liability to render account to their successors, made the ephorate the dominant element in the constitution.

470. There were no other civil magistrates of importance: The *παιδονόμος* superintended the education of the young, the *ἀρμόσυννοι* supervised the conduct of the women. There were doubtless many minor officers, such as the *ἐμπέλωροι*, stewards of the markets, of whom we know nothing more than the name. In the army there were many officers subordinate to the king, while, when Sparta undertook operations at sea, the *ναύαρχος* had to be entrusted with independent command, which gave him almost the position of another king.

Other magistrates.

471. More important than the formal institutions of government was the system of education and discipline to which the Spartans submitted. The Spartan State owed its origin to conquest: its preservation required the subjection of the conquered. Hence, as Aristotle says, their whole system was directed only to efficiency in war, and their city was like a standing camp. The State regulated the whole life of its citizens, who from the age of seven began their course of

Education and discipline.

training (*ἀγωγή*). The boy was entered in a *βουα* (each *βουα* being subdivided into *ἴλαι*). The members were called *παῖδες* (7 to 18 years old), *μελλίρανες* (18 to 20) and *ἴρανες* (20 to 30). From the *ἴρανες* the *βουαγοί* and the *ἱλαρχοί* were chosen, and at the head of the system was the *παιδονόμος*. The education was mainly physical: with a minimum of learning the youths were trained in discipline, endurance and courage, suffering privations in food and clothing. From the age of twenty the Spartans became liable to military service, and entered military messes (*συσσίτια*, called in Sparta *ἀνδρεία* or *φιδίτια*), to which the members (about fifteen in number) contributed their share of food and wine and money, as a necessary condition of citizenship.

The Spartan ideal was narrow. The State demanded the sacrifice of the family as of the individual. While the system ensured a living to the Spartiate and leisure to train himself for war, it put the most galling restrictions on his liberty; he was forbidden to engage in any trade or art, forbidden to leave his country without permission, forbidden to own property, while he passed his life in a training school and his manhood in a barrack. The ideal was impossible of attainment: the system was hollow and effete long before the corruption and decay were revealed by the fall of Sparta's power.

472. The long wars of the fifth century which culminated in the final struggle with Athens, service in foreign lands, the influx of wealth, the introduction of luxury, threatened the old order, while the same causes led to the decline of population (§ 527) and the disfranchisement of many citizens, who could no longer fulfil their obligations. The kingship had been weakened during the Peloponnesian War, when Agis had to submit to the advice of the *σύμβουλοι*. The power of the Ephors had increased; the ambition of Lysander aimed at tyranny; the attempt of Cinadon revealed the internal corruption of the State. Agesilaus by skilful policy revived the power of the kingship and the prestige of the state, but the attempt of Sparta with Persian support to dictate to the rest of Greece was shattered in the disaster of Leuctra, which broke her power for ever. Messenia regained her independence, and the loss of this fruitful domain must have deprived many Spartiates of their *κλήροι* and increased the inequality of property. Other causes contributed to the same result. At some time in the fourth century a law of the ephor Epitadeus gave the Spartiate liberty to dispose of his *κλήρος*, which had hitherto been regarded as State land allotted for individual use; and landed property came into the hands of a few, two-thirds of it in Aristotle's time being held by women. Apart from the serious decline of population, many, who would have been qualified by birth for citizenship, must have lost their rights through lack of property. By 250 B.C. in a total of seven hundred Spartiates only one hundred were still in possession of land. The corruption of the State led two kings in succession to attempt a revolution. With the pretext of restoring the Lycurgean institutions, Agis III

Decline of
Sparta and
revolution.

(242 B.C.) proposed to create new citizens by granting privileges to perioeci and foreigners, to make a fresh distribution of land and to introduce again the old training and discipline. He was opposed by the ephors, whose domination was threatened, and who represented the vested interests of the few Spartiates still possessed of citizenship, and he met with a violent death. Cleomenes III (235—221 B.C.), a king of the rival dynasty, resumed the aims of Agis. Seeing the necessity of supporting his policy by force, he created an army of mercenaries and carried out a revolution. The ephorate was abolished (the ephors being replaced by *πατρονόμοι*), the land re-distributed and the number of Spartiates increased to four thousand. Cleomenes ruled as a tyrant and made his brother the other king. His military ambition brought him into conflict with the Achaean league, and his defeat at Sellasia led to his flight from Greece. His reforms were annulled and the old corruption restored. Lycurgus, a Spartiate not of Heraclid birth, was raised to the kingship, and after expelling the other king reigned as a tyrant. Other tyrants succeeded, and after Nabis had been conquered by the Romans (195 B.C.), the coast towns were organised as a separate federation (*τὸ κοινὸν τῶν Λακεδαιμονίων*). Sparta was forced to join the Achaean league and later received the position of a *civitas foederata* in the Roman province of Achaia. The kingship was abolished, the *πατρονόμοι* becoming the chief magistrates. In other respects old forms were maintained, and even the Lycurgean institutions were supposed to survive.

The best text-books dealing with the subject as a whole are K. F. Hermann, *Lehrbuch der griechischen Staatsaltertümer*, sixth edition (the first and second parts, dealing with Athens and Sparta, edited by V. Thumser, the third part, giving an excellent account of constitutions in general and the principal leagues, edited by H. Swoboda): G. Busolt, *Die griechischen Staats- und Rechtsaltertümer* (second edition); G. Gilbert, *Handbuch der griechischen Staatsaltertümer* (the first volume (second edition), dealing with the Constitutions of Athens and Sparta, has been translated into English); B. Keil, *Griechische Staatsaltertümer* (in Gercke and Norden's *Einleitung in die Altertumswissenschaft*, second edition). Other books that may be consulted are F. W. Newman, *Politics of Aristotle*; J. E. Sandys, *Aristotle's Constitution of Athens*; L. Whibley, *Greek Oligarchies*.

VI. 2. LAW.

A. EARLY LEGISLATION AND THE LAWS OF GORTYN.

473. THE Homeric poems reveal surprisingly little about the character of the unwritten customary law of early Greek communities under the rule of kings. The king was judge in peace as well as captain in war; 'to thee Zeus has entrusted (says Nestor to Agamemnon, *Il.* ix. 99) *σκήπτρόν τ' ἠδὲ θέμιστας*, i.e. the symbol of political power and the knowledge of law, *θέμιστες* being apparently the various concrete manifestations of *θέμις*, Right, and embracing both judicial sentences and established usages. The king, however, was not the only judge. A scene on the shield of Achilles (*Il.* xviii. 497 sqq.) showed 'elders' (*γέροντες*) sitting in the agora 'on polished stones in the holy circle,' to give judgment in a dispute about the 'price of a man slain.' Judges were conceived as upholding Right and Justice by divine commission (see *Il.* i. 238, xvi. 385 sqq., *Od.* xix. 109 sqq.); but jurists search in vain not only the *Iliad* and *Odyssey* but even Hesiod to discover the forms and conditions under which justice was sought and obtained, and the accepted rules of right in particular relations, e.g. as regards succession or debt or the taking of life. Although we read of the duty of avenging a slain kinsman (*Od.* xxiv. 433), of homicides driven to fly their country (*Od.* xxiii. 118), of the acceptance of blood-money (*Il.* ix. 631), it is not possible to define the law of murder and the attitude of the community and its organs towards the blood-fend.

474. Law was first written and published in the seventh century B.C., after the downfall of monarchy, in the course of the political and economical struggle between nobles and commons, land-owners and serfs, rich and poor; and probably by the opening of the sixth century there was no considerable Greek State, Sparta excepted, which had not advanced beyond the stage of unwritten usage (*ἄγραφα νόμιμα*) and absolute (*αὐτογνώμονες*) judges. The change in each case was carried out by a legislator (*νομοθέτης*; note that the word *νόμος* is first found in Hesiod), some distinguished man, not necessarily a citizen, commissioned with absolute authority to draw up and issue a code, which was accepted by the community without modification. The demand for definite rules binding judge and magistrate seems to have been first successful in the new communities of the West, which had developed rapidly, and were not restrained by traditional reverence for an ancient landed aristocracy. The laws made by Zaleucus for Epizephyrian Locri about the middle of the seventh century B.C. were traditionally regarded as forming the earliest Greek code. Charondas of Catana, called by some authorities a disciple

of Zaleucus, was lawgiver not only for his native town but also for the other Chalcidian cities of Sicily and Italy. In later ages both Zaleucus and Charondas enjoyed a high reputation, at any rate with thinkers of a conservative bent, but little is recorded of the details of their legislation. Ephorus asserts that Zaleucus' principal 'innovation' was to limit the arbitrary caprice of judges by stating in his laws the punishment for each offence. According to Aristotle, Charondas introduced the procedure called *ἐπίσκηψις*, and recognised in his laws Courts of Judges, to which poor men as well as rich were admitted (see *Pol.* vi (iv). 13. 1297 a 23). Other ancient legislators were Aristeides of Ceos, Pheidon of Corinth (*Arist. Pol.* ii. 6. 13), Philolaus of Corinth, who made laws for Thebes, and in particular laws regulating adoption (*νόμοι θετικοί*), 'to preserve unchanged the number of the lots of land' (*κλήροι*, *Arist. Pol.* ii. 12. 10), and Androdamas of Rhegium, who legislated for the Chalcidians in Thrace and was the author of laws about homicide and heiresses (*ἐπίκληροι*). More light falls on the development at Athens. The laws framed by Draco in 621 B.C. were a concession wrung by the discontented classes from the governing oligarchy. The Athenian nobles (*εὐπατρίδαι*) were the sole depositories of the secrets of *ius* and *fas*, civil law and religious precept, then hardly distinguishable, while the nine Archons drawn from their ranks were, at any rate in civil disputes, the sole administrators of justice, controlled, if at all, by nothing better than the intervention of the Council of the Areopagus composed of ex-archons. It is doubtful whether Draco did more than formulate and put in order existing practice; he did not meddle with land-tenure and the hard law of debt, although these were the main sources of trouble. Still it was a great advance to substitute a public code with fixed penalties in place of a mysterious body of custom interpreted and applied by the nobility. The only part of this code that is now known is the law of murder and homicide. The rest was abolished or absorbed by Solon in 594 B.C. in his vast attempt to reform the economy, constitution, and laws of his country. Even in the age of Demosthenes, after all the changes of the fifth and fourth centuries, it was Solon, not Draco nor even Cleisthenes, whom Athenians revered as the founder of their legal and judicial system.

475. The development of law and jurisdiction is better shown by the archaic inscriptions found on the site of the Cretan city of Gortyn than by literary tradition. The older of these inscriptions are separated by peculiarities of alphabet and writing into two groups, belonging to two distinct periods. The fragments assigned to the first period cannot well be regarded as older than the fifth century B.C. Fines are estimated in 'cauldrons' (*λάβηρες*) and in 'tripods,' while the obol (*ὄδελός*) occurs only twice in a newly-found fragment. It was supposed that the reckoning in cauldrons and tripods points to a time when coined money was as yet unfamiliar, but in fact coins of the fifth and fourth centuries bearing a small badge of a cauldron or a tripod have been

Laws of
Gortyn: 1st
period.

found in Crete, and so the reckoning may be referred to these coins. Other considerations combine to make the fifth century the most probable time for this first code. The early legislator or legislators of Gortyn, as the broken stones reveal, did not omit to deal with the powers of the magistracy (the Cosmi) and the observances of religion. Thus we have the remains of a calendar for public offerings. But most of the fragments are concerned with details of private law, *i.e.* inheritance and succession, adoptions, dowries, blood-money, rural offences, barter and sale. There are also some rules for funerals. Unfortunately these laws are too fragmentary for us to form any clear idea of their scope and their underlying principles. A scale of fixed penalties was clearly a feature of this legislation as of the code of Zaleucus, and the motive may have been the same in both cases. It is probable that all these early laws were engraved on the walls of the temple of the Pythian Apollo, on the site of which the fragments were discovered.

476. The most important relic of the second epoch is that famous monument of ancient law, which has been given the somewhat misleading title of the Twelve Tables of Gortyn. This inscription was originally engraved on the round interior wall of some kind of court-house in the market-place of the city. Besides the Twelve Tables there are remains of other collections of legal inscriptions, including a group, seven columns in length, which clearly once belonged to a connected whole. There are also many separate fragments, both of laws and of decrees of the Assembly, which throw some light on the laws and their administration. These various inscriptions may be grouped together to represent the second period of Gortynian legislation. But there are at least one hundred years between the earliest and the latest of them. The most important seem to fall within the limits of the fourth century B.C. The matter of the laws is a strange amalgam of barbarism and civilization, of old institutions and new ideas. The principle that the State should supersede the private action of the individual had been realised at Gortyn to a greater extent than at Athens even in the fourth century; on the other hand there are traces of ancient procedure which had vanished from Athenian practice. In fact Crete, like Sparta, is a type of arrested development, the social and political organisation of its cities abounded in archaic survivals even in the age of Ephorus and Aristotle. The Gortynian legislators of the first period are not likely to have dealt with property and the family in a revolutionary spirit; they were content, we may guess, to collect and publish the ancient rules and customs of Gortyn. The laws attributed to the second period look like a restatement, with additions and amendments, of articles and chapters of the prior code; they allude to an existing body of written law, and prescribe occasionally that this or that provision shall not be retrospective. But the foundations on which the new laws rest are gone. The nature and extent of the innovations cannot be fixed with precision, and the aims of the reformers are unknown.

Laws of
Gortyn: 2nd
period.

477. An Athenian of the Periclean age would have scoffed at the old-fashioned and simple procedure. It is entirely oral, yet free from the punctilious formalism and technical incumbrances often found in primitive law. Documentary proofs are not used. There is no written record of the verdict, and a past judgment is proved by the testimony of the judge and his 'remembrancer' (δ μνάμων). The 'remembrancer' still speaks from memory: in the age of Aristotle the title had come to denote a 'registrar.' Oaths and testimony are the only forms of proof. Ordeal has vanished, but the oath, in origin a kind of ordeal, retains much of its primitive significance. At Athens the 'challenge to an oath' ($\pi\rho\acute{o}\kappa\lambda\eta\sigma\iota\varsigma$ εἰς ὄρκον) degenerated into a piece of chicanery. At Gortyn the oath of purgation is sometimes prescribed by law; it is final, and binds the judge. There is one instance of the use of oath-helpers, the 'Eidhelfer' of early Germanic law, men who swear not to a relevant fact, but to support the oath of the principal party by sharing the perils of perjury, 'four for a freeman, two for an ἀπέταιπος (probably a freeman degraded from his $\epsilon\tau\alpha\iota\rho\acute{\iota}\alpha$), the lord (πάστας) for a serf (Φοικεύς).' Kinsmen as 'oath-helpers' in trials for homicide seem to have survived at Cyme in the fourth century B.C.; Aristotle confusing them with witnesses cites the practice as absurd. The fragments of the first period preserve their title, $\delta\mu\omega\mu\acute{o}\tau\alpha\iota$, 'co-jureurs.' Witnesses proper ($\mu\alpha\acute{\iota}\tau\upsilon\rho\epsilon\varsigma$) are either ceremonial or evidential. In general they only make a declaration ($\alpha\pi\omicron\pi\omega\iota\omicron\nu\tau\iota$), but cases are distinguished in which their statement must be fortified by an oath. The number and quality of the witnesses required for the valid performance of certain processual and contractual acts are fixed by law. In some cases the law determines that if both parties affirm their contention on oath, the plaintiff's oath shall prevail against the defendant's oath ($\delta\rho\kappa\acute{\iota}\omicron\tau\epsilon\rho\omicron\nu$ ἤμην).

Laws of
Gortyn:
Procedure.

478. The large tribunals, so eloquent of the Greek fear of corruption and intimidation and found in oligarchies as well as in democracies, have not yet invaded Gortyn, at any rate in civil suits. All cases mentioned in these laws are tried before a single judge, but the judge differs according to the suit.

Laws of Gortyn: Judges and Arbitrators.

Thus we find 'the judge of the $\epsilon\tau\alpha\iota\rho\acute{\iota}\alpha\iota$ ' and 'whosoever judges concerning pledges' ($\delta\varsigma$ κα τῶν ἐνεκύρων δικάδῃ), and in more general terms, 'The complainant shall plead where it is proper, before the judge, as is written for each case.' The classification of actions and jurisdictions is not preserved, nor is it stated how the judges were selected. It is possible that in some cases they were executive magistrates, members of the College of Cosmi, who at Gortyn had taken the place of the king. We see that one of this body, δ κοένιος κόσμος, had jurisdiction in disputes affecting the status of freedmen, as the Polemarch had at Athens; and Aristotle asserts that the power of the Cosmi in Crete was identical with that of the Ephors at Sparta, who certainly had judicial functions. If the judges were really members of the executive, Gortyn was at the same stage as Athens in the years between the

legislation of Draco and the reforms of Solon, when the archons were bound by a code but had not ceased to be judges with full powers. However this may be, the growth of written law has not entirely effaced the features of the early 'doom-giver.' In part the Gortynian judge has become only the mouthpiece of the law, obliged to 'give judgment' (*δικάζειν*) according to the witnesses or the oath of purgation, wherever the law prescribes these forms of proof, but he still retains a province in which he has great latitude of decision, where he 'takes oath and decides' (*ὀμνὸς κρίνει*) 'in view of the contentions of the parties' (*πορτὶ τὰ μωλιόμενα*) as distinguished from 'the declarations of the witnesses' (*τὰ ἀποπωνιόμενα*), where, in short, he combines the freedom of the *arbitrator* with the dignity of the *iudex*, 'not necessarily affirming or denying the respective pretensions of the parties, but deciding according to his solemn conviction of what is right in the circumstances.' Judgment generally takes the form of an award of damages, calculated either in money (*στατήρες, δάρκαι, ὄδελοί*) or according to the value of the property in dispute (the double, the triple, etc.). The judge can also declare a right and issue an order to act or abstain, but contempt of such a sentence does not provoke of necessity the immediate intervention of the executive; the sanction is again a fine, proportional or progressive, and payable to the injured party. The period within which sentence must be given is occasionally specified, and the penalty for refusing to give judgment seems to have been confiscation of the estate of the recalcitrant judge. Appeal from a judgment is not mentioned, and execution is apparently left to the energy of the successful litigant, who, within certain limits, may enforce his rights by seizing not only the goods but the person of his adversary.

Arbitrators appear on one mutilated fragment, from which we discover that they were sometimes required under penalties to pronounce the award within three days from the appearance of the parties. Their name and their place in the general system are unknown.

479. In surveying the contents of the laws the archaic elements, as is natural, seize first the attention of the reader. Rape and adultery are regarded simply as matters for private compensation, and the law lays down a graduated tariff of compositions. The treatment of adultery is a particularly instructive example of the caution with which in rude societies the State interferes to check private vengeance and self-redress. The composition for adultery is still the Homeric *μοιχάγρια*, i.e. the ransom of an offender caught in the act and detained by the injured family. The exposure of infants appears a matter of course, of which the law takes notice only in order to protect the rights of the father, if the child is free, or of the lord, where serfs are concerned. The law of debt is primitive, though apparently milder than that of early Roman history. At Gortyn, though it is unlawful to arrest before trial a slave whose ownership is disputed, or a freeman whose status is in question, a special clause guarantees the rights of the creditor: 'the man convicted in court (δ

Laws of Gortyn: archaic elements.

νεγκαμένος, who has some resemblance to the Roman *addictus*) and the man whose person is pledged (*ὁ κατακείμενος*, the *nexus*) may be arrested with impunity.' The debtor is conceived as in temporary custody, bound to work at the mandate of the creditor to whom he has pawned himself (*ὁ καταθέμενος*). He may still be sued, like any other citizen, for injury done to a third person, and cast in damages, but 'if he has not the means to pay,' the successful prosecutor and the creditor who holds the man as security, have to come to some arrangement, the particulars of which are lost. On the other hand, if the debtor suffer wrong, the creditor must sue for him, and claim the indemnity due to a freeman, which, when recovered, is to be shared equally between the two. The rights of the creditor are also protected by a law that acts of gift are not valid if they conflict with the claims of a creditor.

480. The law of the family which includes the law concerning slaves is comparatively modern in principle. In a sense the family at Gortyn is the antithesis of the family at Rome. *Patria potestas* is unknown. Sons can hold property of their own acquired either by their own exertions or by inheritance, and the father is not responsible for their debts. The separate rights of women and of children are recognised to a degree which neither Attic Law nor Roman Law ever reached. So in the case of married women the husband has only the usufruct of his wife's estate. When she dies he has no right of inheritance. If there are children, the property is theirs. If there are not, her heirs at law recover not merely 'the goods she brought with her,' into the marriage, but also half of the 'fruits' of the property, and half of all 'that she has woven in the house.' A like principle obtains, when marriage is ended by the death of the husband or by divorce. On the other hand, testaments are unknown, even in the rudimentary form introduced at Athens by Solon. The code seems to be combating the tendencies which produce the testament; it seeks to protect heirs at law by fixing a maximum for gifts (apparently *donationes mortis causa*) by a husband to a wife or by a son to a mother. The order of succession resembles in the main that at Athens. One remarkable innovation, foreign to ordinary Greek practice, deserves notice; daughters are conceded a right of inheritance by the side of sons. The aim, however, of this reform is apparently rather to limit dowries than to protect daughters; it is also provided that a dowry must not exceed the daughter's proper share of the estate. As parts of the estate the law specifies houses in the city, cattle, and 'goods' (*κρήματα*). Land is not mentioned; perhaps the territory of Gortyn consisted of common pastures, over which the citizens had grazing rights and of inalienable 'lots' of arable land, which were occupied and cultivated by the serfs. These lots apparently remained undivided, but probably the eldest son acted as lord (*πάστας*) over the serfs. The slave is regarded as an integral part of the family and comes under the protection of the law, which shows a tendency towards an increasing recognition of his right. Thus the slave is protected from injury

Laws of
Gortyn: new
tendencies.

by a third party though the right to recover damages is vested in his master. Even against his master the slave can claim protection from outrage and even proceed at law against him. The slave may own property and may contract a legally recognised marriage. Some clauses in laws of the second period regulate the position of children born of the marriage of a slave and a freewoman. The children are free if the slave goes to live in the house of the freewoman, they are unfree if the freewoman goes to the slave. A later decree does away with this distinction and makes the children of any freewoman free. Children born of a free man and a slave woman were already regarded as free. So, too, the position of freedmen is defined and legally protected. They are placed under the especial care of officials called *τίται*. The elaborate provisions made to secure the proper marriage of an 'heiress' (*πατριωῖκος*) have travelled far from the primitive conception of the sacred duty of the kin to raise up a son of the blood of her father. It is plain that the pecuniary interests of the relatives overshadow their obligations to the 'heiress' and her father's house. Thus the law forces an unmarried girl, if an 'heiress,' either to marry *e.g.* her oldest paternal uncle, if he profess willingness, or to indemnify him by the surrender of part of the estate. But the estate might be little or nothing. The law does not in this case force any relative either to take the girl or provide a dowry, as was the rule at Athens, and yet it still holds to the old principle that married she must be, and with speed. Adoption, again, is an example of an old institution in a state of transformation and decay. The procedure is of antique simplicity, the act being public and oral, as the name denotes (*ἄπτανσις*, announcement). *'Announcement shall be made in the agora, when the citizens are assembled, from the stone from which speeches are made. And the adopter shall give to his ἑταῖρία a victim and a pitcher of wine.'* There is no hint that the citizens are anything but witnesses, that the *ἑταῖρία* can refuse to admit the new member to their fellowship. The original design of the practice was to supply the want of a male heir in the direct line and to secure the continuance of the family with its *sacra*, and this view is the source of the Athenian rule that a father of children cannot adopt. It is not clear that this restriction survived at Gortyn. The main concern of the law is to depose the artificial son from a position of equality with natural heirs. In the presence of children he is not permitted to inherit more than the portion of a daughter. Here too the Athenian law keeps closer to the primitive idea; at Athens, if after the adoption children were born to the adopter, the adopted heir still retained the full rights of a son. Moreover the bond is easily dissolved; the son may be 'renounced' (*ἀποφειπέν*) by a declaration from the stone in the agora before the assembled citizens, receiving as consolation a gift of ten staters formally delivered by the 'remembrancer of the Cosmus of strangers' (*ὁ μνάμων ὁ τῷ κσενίῳ*).

B. THE ATHENIAN JUDICIAL SYSTEM IN THE FOURTH CENTURY.

481. The system of jurisdiction developed under the Athenian democracy had its origin in the legislation of Solon. Before Solon the nine Archons exercised full judicial power, not merely receiving complaints and examining the parties, but pronouncing final judgment. Solon (Arist. 'Ath. Pol. 9) introduced 'the reference to the dicasterion' (ἡ εἰς τὸ δικαστήριον ἔφεσις): in other words, he allowed an appeal from an Archon's sentence to a court of judges, which represented the nation, and, in theory at any rate, included members of every class, even the poorest. At first this court was probably a meeting of the δῆμος, like the ecclesia, without any elaborate organisation. It is not possible to fix a certain date for the beginning of that elaborate organisation of dicasteries which is reflected in the literature and inscriptions of the fourth century. Such a system with magistrates dependent on it presupposes constructive legislation, and of this no record survives. We only know that Pericles introduced the practice of paying these judges, and so the dicasteries became effective democratic organs.

Development
of the Demo-
cratic Courts.

482. The remarkable feature of the system is the sharp distinction between a court of judges (δικαστήριον) and a president of such a court (ἡγεμὼν δικαστηρίου). All magistrates, not merely those whose duties were primarily judicial, but executive officials like the Eleven or the Generals, and even Financial Boards such as the Receivers-General (ἀποδέκται), might act as ἡγεμόνες δικαστηρίων. Two cases must be discriminated. On the one hand magistrates retained from an earlier and non-democratic age the right of punishing offences within the sphere of their administrative activity by the imposition of fines (ἐπιβολαί); but the maximum of such fines was fixed by law and, though no doubt varying with the office, was never large, so that officials had no independent power of dealing with acts of contumacy or illegality, when the legal fine was inadequate. They could, if they chose, lay a 'denunciation' (εἰσαγγελία) before the Council or Assembly, but probably the ordinary course was to bring the offender before a court. We do not know the rules of procedure in such a case. It is not likely that the magistrate was both president and prosecutor. The charge may have been delegated to a deputy. The second and more important case was when a magistrate did not come before a court of his own motion, but introduced complaints and claims of private persons concerning matters which belonged to his special department. His rôle resembled that of a court officer. He received the charge, saw that legal rules were observed, prepared the materials on which the judges had to decide, settled with the Thesmothetae the day of trial, presided in court, and sometimes was responsible for execution of the

ἡγεμονία
δικαστηρίου.

sentence. The law and practice of the constitution left him small authority during the preliminaries of a trial and no influence at all on the judgment. This separation of judicial and ministerial functions followed in the main a simple and intelligible principle. An executive magistrate was not competent to entertain charges unconnected with the laws he had to apply and enforce. His 'hegemony' was defined by his office. As the First Archon (ὁ ἄρχων) guarded the interests of orphans, heiresses, and widows, so he had cognizance concerning the family rights of citizens. A charge of murder or sacrilege had to be presented to the Second Archon (ὁ βασιλεύς), who retained both the name and the religious duties of the primitive king. The old military functions of the Third Archon (ὁ πολέμαρχος) explain why he received a variety of actions, public and private, affecting freedmen and resident aliens. A prosecution, however, for a military offence, *e.g.* falling out of the ranks in battle (λιποταξίον), was brought before the Generals, because the control of the Army and Navy had passed to this board. If merchants were suspected of not conveying from the port to Athens the prescribed proportion of a grain cargo, the Superintendents of the Emporium (οἱ ἐπιμεληταὶ τοῦ ἐμπορίου) were the proper persons with whom to lodge an information (φάσις).

483. This principle of distribution, which is easily applied to administrative posts, fails us when we come to the magistrates οἱ θεσμοθέται. whose work was primarily or entirely judicial, *i.e.* the Thesmothetae (the six Junior Archons acting as a College), the Forty, and the Introducers (εἰσαγωγεῖς). Roughly stated, the difference between their provinces is that the last two boards received nothing but private actions, the Thesmothetae little save public actions. As administrators the Thesmothetae were answerable for the annual revision of the laws, the arrangement of the time and place of trials, and the ratification of the international compacts (τὰ πρὸς τὰς πόλεις σύμβολα) which sometimes regulated the conduct of suits between foreigners and citizens. Their 'hegemony' embraced a few private actions, *e.g.* mining cases (δίκαι μεταλλικαί, in which the State as lessor of the mines often had an interest), 'mercantile' cases and 'treaty' cases (δίκαι ἐμπορικαί and δίκαι ἀπὸ συμβόλων, one of the parties in the first kind of suit being frequently, and in the second necessarily, an alien), but their principal task was to preside over public actions, and especially actions to punish crimes directly assailing the constitution or administration of the State, *e.g.* 'denunciations' (εἰσαγγελίαι), 'presentments' (προβολαί), 'informations' (ἐνδείξεις), indictments of the presidents of the Council and Assembly (γραφαὶ προεδρικαὶ καὶ ἐπιστατικά), indictments for illegal proposals (παρανόμων), prosecutions of officials for taking bribes (δώρων), and for other offences, *e.g.* wrongfully entering a name on the list of State-debtors (ψευδεγγραφή), prosecutions of aliens for usurping the rights of citizens (ξενίας), and of citizens for false citation (ψευδοκλητείας). Further, they prepared for trial some public actions of a different kind, in which the individual, not the State, was

immediately injured, *e.g.* γραφαὶ ὕβρεως, but the principle on which these were selected is not now apparent; why, for example, did Athenian legislators assign prosecutions for adultery (γραφαὶ μοιχείας) to the Thesmothetae rather than to the First Archon, the protector of the family?

484. The Forty were more prominent in the ordinary life of Athenians than they are in the records of literature and inscriptions. The office seems a democratic creation, being the descendant of the thirty itinerant judges (δικασταὶ κατὰ δῆμους), established in 453/2 B.C. Their number after the fall of the thirty tyrants (403 B.C.) was raised to forty, four members being drawn by lot from each tribe. They were divided into ten sections, according to their tribes, and each section received suits brought against members of its own tribe. This was the tribunal that had jurisdiction in the bulk of private suits, particularly suits about rights of property, sales, debts, contracts, leases, etc. The Forty were to some extent real judges; their sentences in disputes involving less than 10 dr. were final. Further, unlike the magistrates hitherto considered, they did not prepare for trial the more important actions which they were not permitted to settle on their own authority, but selected by lot a public arbitrator and remitted the case to him.

485. These public arbitrators (οἱ δαιτηγαί) were an organised body, composed of all Athenians in their sixtieth year, *i.e.* the last year of military service. The individual appointed by the Forty was compelled to discharge the task allotted on pain of disfranchisement (ἀτιμία), unless in that year he held another office or happened to be abroad. Any complaint brought against an arbitrator by an aggrieved suitor was heard by the whole body in session, and the legal consequence of an adverse verdict was disfranchisement, though the condemned arbitrator was allowed an appeal to a δικαστήριον. The first duty of the arbitrator was to seek to effect a compromise. If this proved impossible, after due hearing of the arguments and evidence he gave his award on an appointed day (ἡ κυρία, *sc.* ἡμέρα) and confirmed it by a solemn oath at the 'stone of swearing' in the agora. If the litigants acquiesced, the suit was ended. If, however, either side 'appealed to the court' (ἐφιέναι εἰς τὸ δικαστήριον), the arbitrator placed in two caskets (ἐχῆνοι), one for each party, the depositions, oaths, challenges, in short all the material on which his sentence was based, attached a written note of his decision, and gave the caskets under seal to that section of the Forty from which he had received his commission. These then brought the case before a court, and presided over the trial. The judges were 201 in number, if the sum involved was under 1000 drachmae; 401, when the amount was larger. In the pleadings it was not permitted to appeal to any depositions or laws or challenges except those contained in the caskets and already used before the arbitrator.

The public arbitrators are one of the most interesting products of Athenian democracy. The design of the institution was excellent, to

οἱ τετταράκοντα.

οἱ δαιτηγαί.

procure the settlement of private suits by experienced and impartial men whose first aim was to make peace. How far it was successful, and what amount of business was terminated without an appeal, cannot now be discovered. The arbitrator was designated by the chance of the lot, and the weight of his judgment with the litigants and the court must have varied according to his personality. But in appreciating the democracy it is important to remember that in a large number of disputes the constitution did not compel two quiet citizens to face the ordeal of a trial in court, but provided a cheap and simple and reasonable means of getting justice.

486. The 'Introducers' (οἱ εἰσαγωγεῖς) were a special board in charge of certain actions in which a speedy decision was desirable. They were five in number, one for two tribes, and were appointed by lot. All suits assigned to them were *ἔμμηνοι*, i.e. were brought to trial in a court within a month from the reception of the plaint, but their 'hegemony' did not cover all 'monthly' suits; thus *δίκαι ἐμπορικαί* were *ἔμμηνοι*, as were various actions brought by and against the Tax-farmers (*τελώναι*) before the Receivers-General (*ἀποδέκται*). They prepared actions for the recovery of a wife's dowry, actions against certain classes of debtors, actions for assault (*αἰκείας*: so *Ἄθ. Πολ.* 52, but in 346/5 B.C., according to Dem. xxxvii. 33, these cases went before the Forty), actions to recover what were called *ἔρανοι*, i.e. loans not bearing interest and consisting of joint-contributions from friends associated *ad hoc* by the borrower or some other person (*δίκαι ἔρανικαί*), actions in which bankers and partners were concerned (*δίκαι τραπεζιτικάί, κοινωνικαί*), actions arising out of a trierarchy.

487. The all-powerful judges of the democracy, οἱ δικασταί or οἱ ἡλιασταί (an archaic name, rare in the Orators and of uncertain origin), whose courts controlled the appointment and conduct of the executive and eventually curtailed even the authority of the Assembly, were nothing but a body of ordinary citizens, over thirty years of age and not in any way disqualified, i.e. not in debt to the State and not under sentence of *Atimia*. No record survives of the manner in which this body was recruited and subdivided during the fifth century. As to its size we have no better evidence than Aristophanes who, writing in 422 B.C. (*Wasps* 661), sets down 6000 as a maximum that had never been exceeded, and Aristotle (*Ἄθ. Πολ.* 24) who, in describing the results of the imperial and democratic policy of Athens after the Persian wars, mentions 6000 judges as an item in a total of more than 20,000 citizens who received pay from the State. The pay, introduced by Pericles (probably soon after the overthrow of the Areopagus in 462/1 B.C.), was increased by Cleon in 425/4 B.C. to 3 obols (*τριώβολον*) for a day's sitting, and this rate was retained throughout the history of the institution. Little is known about the organisation of the judges even in the fourth century, until we reach the age of Aristotle. The *Ecclesiazusae* and *Plutus* of

Aristophanes show that in the first quarter of this century they were drafted into ten sections, marked by the letters A to K. The system cannot be reconstructed from a comedian's allusions, but it is different from that described by Aristotle in the *Constitution of Athens*. Even Aristotle's account contains obscurities which are not entirely due to the imperfections of the ms. Here only the leading features can be noticed. Appointment to the office of judge must be carefully distinguished from appointment to serve at a particular trial. As to the first we learn that the judges were distributed into ten sections, numbered from A to K, and that each section contained approximately the same number of members, and included representatives from every tribe; but we are not told how or when judges were chosen, nor whether there was a fixed number. Each judge on appointment received a ticket (πινάκιον) of boxwood, on which were inscribed the letter of his section and his full style as a citizen, *i.e.* his own name together with the names of his father and of his deme. The process of forming a court (δικαστήριον) to hear a case was singularly elaborate. The Thesmothetae determined what trials should be taken, and what court-houses used, on a given day, the lot deciding between the competing claims of magistrates who had business ready. The aggregate of judges required was easily made out by the authorities, since the law or special decrees (ψηφίσματα) determined the number that should sit in each suit. Early in the morning the judges assembled at the allotment-chambers (κληρωτήρια), one for each tribe (not, as might have been expected, one for each section), and the nine archons and the Secretary (γραμματεὺς) of the Thesmothetae proceeded to the sortition, each presiding over his own tribe. The first business was to settle who among the judges present were to serve that day, the number to be drawn in each allotment-chamber being one-tenth of the total needed. The peculiarity of the process or sortition consisted in the ingenious arrangements directed to ensuring the selection of representatives from each of the ten sections into which each tribe was divided. Why such pains were taken Aristotle does not explain. The next task was to allot to the various trials the judges who had been nominated for the day. The Thesmothetae chose the court-houses to be used, and marked each by a letter from A onwards, assigned by lot. Moreover the door of each court-house bore on its lintel (σφηκίσκος) a distinguishing colour. Let us suppose that only two courts were to sit, one of 200 judges, one of 400, and that A was allotted to the green court (τὸ βατραχιῶν), M to the red court (τὸ φοινικιῶν). Then in each allotment-chamber twenty acorns (βάλανοι) marked A, forty marked M were deposited in an urn (ὑδρία), and twenty green batons (βακτηρίαι), forty red batons were placed at the entrance. The sixty judges already selected were called up one by one and drew an acorn from the urn. The acorn determined each man's court. A judge who drew A was given a green baton, and armed with acorn and baton went off to the green court. Before entering he

probably gave the acorn to an official, and received in return a ticket (*σύμβολον*) which he had to present at the end of the day in order to get his three obols. Pay was not distributed by tribes but by sections. The aim of this complicated system was to prevent bribery, intimidation, and packing. Accident alone determined where an individual would sit, and no man could get admission to a court to which he had not been allotted. Further, each court was made an image in miniature of the nation, containing an equal contingent of judges from each tribe.

Courts of 201, 401, 500, 700, 1001, 1,500, 2000, 2,500 are mentioned by authorities of the fourth century. A court of 6000 occurs once only, in Andocides, *Myst.* 17, but the text is justly suspected. The even numbers in the authorities, such as 500, 700, etc., are probably inexact and mean courts of 501, 701, etc. Courts of 1001 and more are only found in great political trials.

The judges were sworn once a year, possibly when appointments were made and the sections recruited. The entire oath cannot be reconstructed, but the following clauses can be recovered from scattered references in the Orators. 'I will vote according to the laws and according to the decrees of the Athenian People and the Council of the 500, and where there are no laws, according to my most honest judgment, without favour or animosity.' 'I will vote on nothing but the matter of the charge.' 'I will hear impartially both the prosecutor and the defendant.'

488. The democratic theory that it was the duty and privilege of every citizen to take part in the work of government was every-

Character of
the courts.

where applied by the Athenians with excellent logic and much fertility of contrivance, but nowhere with more thoroughness and ingenuity than in the constitution of their tribunals. The complex organisation we have described rests on two very simple ideas, that law ought to be intelligible to the average man, and that the common sense and moral instincts of large bodies of ordinary citizens are the best guarantees of a pure administration of justice. There is no evidence that the Athenian judges were often bribed or terrorised or intentionally dishonest. Neither did the discretion granted them in the absence of a statute become an instrument of oppression. This danger, though real enough, was diminished by the number and representative character of the judges, who were not likely to treat as criminal acts tolerated by public opinion. But the speeches of the Orators are a convincing proof, if proof be needed, of the vices inherent in such a system. The amount of injustice done cannot now be estimated, but it is sufficient condemnation of the courts that appeals to passion and political prejudice, insinuating sophistry, and outrageous misrepresentations of law were judged by shrewd and experienced observers suitable means to win a verdict. No development of law was possible; nothing excited the suspicion and mistrust of the judges so much as a display of legal subtlety. No body of precedent to supplement or interpret the written

code could be formed from recorded judgments. The conclusions of a court were bare affirmations or negations, not discriminating between law and fact, applicable only to a particular case, and based on reasons, which were known only to the individual voters, and perhaps not always to them. And these decisions, such as they were, could not bind another court, for in theory and practice the courts were equal and independent, each being a committee of the Sovereign People, supreme and irresponsible.

489. The steady growth of the authority of these courts left ultimately little room for judicial activity on the part of the Council and the Assembly. There was a time (probably not before the curtailment of the prerogatives of the Areopagus in 462/1 B.C.) when the Council of 500 could not only fine and imprison, but even inflict capital punishment. In the fourth century we find the supremacy of the dicasts definitely established by statute. The Council was only empowered to imprison traitors and conspirators against the democracy, and defaulting tax-farmers with their sureties and collectors. It could not impose a fine above a certain amount, apparently 500 dr., and was compelled to refer to the courts all grave offences brought under its notice. The judicial functions of the Council, like those of a magistrate, were of two kinds. It was an administrative as well as a deliberative body, and was responsible for the proper conduct of certain branches of the public service, e.g. finance and the navy. In this capacity it could intervene *ex officio* to investigate, and punish or get punished, offences within its province. But it had another and a wider sphere; the bulk of the 'denunciations' (είσαγγελία), whether brought by a magistrate or private citizen, were laid before the Council. If the Council voted that the charge should be investigated, the Presidents (πρυτάνεις) arranged a time for trying the case and had power to imprison, or hold to bail, the accused according to the gravity of the alleged defence. If after hearing both parties the majority voted for acquittal, the accused was released and the business ended. If on the contrary he was declared guilty, the Council had next to decide whether a fine, such as it was competent to inflict, was an adequate punishment, or whether the matter should be referred to a body with greater judicial powers.

Jurisdiction
of the Council
and Assembly.

είσαγγελία.

Denunciations might also be submitted to the People at that Assembly in each Prytany which was called ἡ κυρία. The people first voted by show of hands (χειροτονία) whether the information should be accepted or not. The acceptance of a denunciation brought about the same position as the preliminary investigation by the Council. In either case it was possible for the Assembly to act as a court and try the case on its own reference or at the instance of the Council, or for the Council or Assembly to refer the matter for trial to a dicastery. At the beginning of the fifth century it seems to have been the practice to refer all such cases to the Assembly.

From about the middle of the fifth century to the first decades of the fourth century these cases were sometimes submitted to the Assembly, more often to a dicastery, from early in the fourth century onwards always to a dicastery. The Thesmothetae acted as Presidents of the court in these matters and there were legal provisions to ensure a speedy trial.

The offences which might properly be prosecuted by an *είσαγγελία* were not clearly defined until a point about the middle of the fourth century. Before that date the *είσαγγελία* was used to enforce an ancient law which punished with death anyone who deceived the people with false promises. So also treason (*προδοσία*), whether in its widest sense or in particular, the betraying of a fortress, etc., might be made the object of a 'denunciation.' In fact the *είσαγγελία* was used to punish political defeat as was impeachment in English politics, except that at Athens the procedure was simpler and much more commonly employed. Also the Council might entertain a 'denunciation' on any subject over which they exercised a general superintendence, e.g. finance.

About the middle of the fourth century, however, when the *είσαγγελία* had become no more than a means of bringing an offender before a dicastery and the part played by the Council or Assembly was little more than a formality, the offences for which a 'denunciation' was the proper procedure were strictly defined and grouped together in a *νόμος είσαγγελτικός*. The offences in question were (1) an attempt to overthrow the democracy, (2) the betrayal of a city or army or fleet to an enemy, or any treasonable dealings with an enemy, or (3) corrupt bad advice given by an orator to the people (*εάν τις ῥήτωρ ὦν μὴ λέγῃ τὰ ἄριστα τῷ δήμῳ τῶν Ἀθηναίων χρήματα λαμβάνων*). According to Hypereides prosecutors sought to bring very various offences within the scope of this law and irregularities were permitted, but the law itself was clear. These political *είσαγγελίαι* should be distinguished from two other kinds of 'denunciation.' (1) *είσαγγελίαι κακώσεως* (maltreatment of parents, orphans, heiresses, or widows) which were laid before the First Archon and always tried by a dicastery, (2) *είσαγγελίαι διαιτητῶν*. The use of the term in these cases is due to the general sense of 'denunciation' in the word before the procedure was appropriated for definitely political offences.

490. A 'presentation' (*προβολή*) was a criminal information laid before the people. On certain fixed days citizens could present to the Assembly the names of sycophants (not more than six at a meeting) and of persons who had deceived the demos by false promises or, like Meidias, violated the sanctity of a festival. The procedure did not aim at securing a trial either conducted or commanded by the people, but at testing public opinion as a preliminary to an action in court. The people heard the charge and the defence, and a show of hands was taken on the guilt of the accused. If the decision was against the complainant, it was injudicious, possibly illegal, for him to go further. If the accused was condemned, the assailant profited by the moral effect

of the vote, if he went before a court, but he was not obliged to bring an action, and if there was a trial, the judges were in no way bound by the verdict of the Assembly.

491. Only one domain escaped to some extent the encroachments of the popular courts. The Athenians were singularly conservative in their treatment of homicide. The principles and rules of Draco's code were still venerated in the age of Aristotle, after three centuries of profound change. The law abolished the blood-feud and blood-money, and discriminated degrees of guilt, but never, as at Rome, came to rank the taking of human life with other offences against the community. Plato's *Laws* prove the vitality of the old religious conception of bloodshed, that the murderer was polluted and spread pollution, that the angry spirit of the victim called on his kindred for vengeance. The part of the State at Athens was to control and regulate the methods of this vengeance, and to prescribe the conditions on which the offender should receive the 'forgiveness' (*αἰδεσις*) of the avengers and be purified of the stain of blood. Trials for bloodshed were held at five different places, always in the open air: on the Areopagus, at the Palladion (a sanctuary of Pallas on the E. side of the city outside the walls), at the Delphinion (a sanctuary of Apollo Delphinios, also on the E. side of the city and outside the walls), in Phreatto (a tongue of land overlooking the sea near the harbour of Zea), and at the Prytaneum, the official residence of the First Archon, on the N. slope of the Acropolis. It is supposed that the first three places were originally refuges where the shedder of blood found asylum.

Trials for homicide.

The five courts.

Cases of voluntary homicide (*φόνος ἐκούσιος* or *ἐκ προνοίας*), of wounding with intent to kill (*τραῦμα ἐκ προνοίας*), of arson (*πυρκαϊά*), and of poisoning (*φάρμακα*) were heard on the Areopagus. The judges were the ex-archons, who composed the Council of the Areopagus. The penalty of murder was death and confiscation of property; of malicious wounding, banishment and confiscation.

In the age of Draco and Solon fifty-one judges called *ἐφέται* sat at the Palladion, the Delphinion, and Phreatto. The significance of the title is unknown, and all that is handed down to us about the mode of appointment is that *ἐφέται* were 'chosen according to merit' (*ἀριστίνδην*, i.e. not by a property qualification, *πλουτίνδην*, and not by lot). Whether this ancient institution survived at all under the developed democracy is doubtful; at any rate early in the fourth century it seems to have disappeared, for examples are found of large courts (e.g. 700) of dicasts trying cases of involuntary homicide, which Draco's laws assigned to the *ἐφέται*.

The court at the Palladion took cognisance of involuntary (*ἀκούσιος*) homicide, of conspiracy (*βούλευσις*, procuring or counselling another to wound or kill), and of the killing of a slave or resident alien or foreigner. The punishment of unintentional manslaughter was banishment for a

limited period without confiscation. Apparently, if the next of kin granted 'forgiveness' according to certain rules, the exile could return before the expiry of the legal terms.

The court at the Delphinion heard those who confessed to homicide, but pleaded that it was lawful (*δίκαιος*). The principal cases exempted from punishment, but not from ceremonial purification, were these: if the deed was done in self-defence, if the slain man was an adulterer taken in the act, if a competitor in an athletic contest or a comrade in war was killed unintentionally.

The court in Phreatto cannot have sat very often. It was required if a man, already banished for unintentional homicide, sought to clear himself of a further charge of murder or malicious wounding. The exile was obliged to conduct his defence from a boat that he might not pollute the soil of Attica, and the judges heard him from the shore.

The proceedings at the Prytaneum were even more archaic. Here the King (the Second Archon) and the Tribe-Kings (*φυλοβασιλείς*) solemnly tried and sentenced undiscovered murderers, and animals or inanimate objects that had caused the loss of human life. The condemned objects were cast beyond the bounds of the State.

492. The magistrate to whom all prosecutions for homicide were brought was the King, the representative of the State-religion. None but the next of kin were entitled to prosecute. A murderer was secure from molestation, if he received the pardon of his victim. A person accused of homicide was not arrested, but on receiving the plaint the King issued a proclamation (*πρόρησις*) forbidding him to enter the agora or sacred places. Even after the beginning of the trial the defendant could escape the death-sentence by withdrawing from Attica. Once outside the country he was guaranteed from violence on condition of avoiding the Panhellenic games and the Amphictyonic festivals; it was unlawful to pursue or arrest him across the frontier.

493. The distinction between public and private wrongs was recognised in the code and judicial practice of Athens as early as the age of Solon. In the fourth century actions were classified as either public (*ἀγῶνες δημόσιοι*, *δίκαι δημόσιαι*, or simply *γραφαί*) or private (*ἀγῶνες ἴδιοι*, *δίκαι ἴδιαι*, or simply *δίκαι*) according to the nature of the offence or matter in dispute; but the line of division between crimes and civil injuries was naturally not the same as that drawn at Rome in the days of Gaius, or in England at the present time; and of course there were occasions when an Athenian had the option of proceeding either 'publicly' or 'privately.' Moreover, if the archaic rules of *δίκαι φονικαί* be set aside, no essential difference can be discovered between civil and criminal procedure. In both the preliminaries conducting to a trial were generally the same, a summons (*πρόσκλησις*) and a statement of the charge before some magistrate. In the trial, it is true, there might be a

difference, for all public actions (except certain *δίκαι φονικαί*, and such *εισαγγελίαί* as were decided in the Council or Assembly) were carried at once before dicasts, whereas many (but not all) forms of private action went in the first place to a public arbitrator, and probably were often settled without an appeal to the supreme tribunal. The principal peculiarities of a public suit sprang from the absence of a Public Prosecutor and showed themselves in the position and liabilities of the person bringing the action. (1) Any Athenian in possession of the full rights of a citizen was entitled, although not directly wronged or injured, to institute any public action, provided it was not one of the *δίκαι φονικαί*; in a private suit the plaintiff could be no one but the person whose rights were immediately affected, or the legal representative (*κύριος* or *προστάτης*) of such person, if a woman or minor or resident alien. (2) In public actions the punishment or fine was regarded as satisfaction due to the State, and there were only a few public actions, *e.g.* *φάσις* and *ἀπογραφή*, in which the prosecutor received any portion of the pecuniary penalty awarded on condemnation; in nearly all private actions the object in dispute or the compensation went to the plaintiff; we know in fact only three forms of private action in which the State exacted a penalty over and above the private damages, *i.e.* *δίκαι βιαίων* (forcible seizure of chattels and rape of a free person), *ἐξούλης* (ejectment), *ἐξαιρέσεως* (*uindicatio in libertatem*, when the plaintiff claimed a person as his slave and the defendant maintained that the alleged slave was free). (3) In a public action the prosecutor incurred a fine of a thousand drachmae (*αἱ χίλια*), and a modified *ἀτιμία*, forfeiting the right to bring a similar public action in the future, if he either withdrew before a trial or failed at the trial to obtain a fifth of the judges' votes; in private suits the State, as the system of arbitration indicates, did its best to encourage compromises out of court and peaceful settlements. In certain private actions (*e.g.* *δίκαι ἐμπορικαί* and *παραγραφαί*) a litigant, generally but not always the plaintiff, failing to obtain a fifth of the votes incurred an additional penalty, being condemned to pay to his successful opponent one obol for every drachma of the sum at issue, *i.e.* one-sixth of the whole (*ἡ ἔπωβελία*). (4) In private suits in which the damages were estimated at more than 100 dr. both parties paid court-fees (*πρυτανεία*), 3 dr. for damages from 100 to 1000 dr., 30 dr. for higher sums. A deposit (*παρακαταβολή*) of a tenth part of the amount claimed was required from a person laying claim to a disputed inheritance, a deposit of a fifth from a person asserting rights in property confiscated by the State (*ἐνεπισκῆπτεσθαι*). In a public action the prosecutor generally paid nothing but a trivial fixed sum called *παράστασις* (a drachma?), and even this was not always demanded, *e.g.* in *εἰσαγγελίαί κακώσεως*, but if the action was a *φάσις* or an *ἀπογραφή*, in which success brought pecuniary profit to the prosecutor, court-fees on the usual scale were obligatory.

494. Another division of actions, into *δίκαι πρὸς τινα* and *δίκαι κατὰ τινος*, is to be distinguished from the preceding classification, and has in view only the punishment or non-punishment of the defeated party. Nearly all public actions are obviously *δίκαι πρὸς τινα*, but a *γραφὴ παρανόμων* brought against the author of a law at a time when he was no longer liable to penal consequences, was ranked among *δίκαι πρὸς τινα*; hence the speech written by Demosthenes against Leptines' law (or. xx) bears the title *πρὸς Λεπτίνην*, whereas Aeschines' indictment of Ctesiphon's *ψήφισμα* is inscribed *κατὰ Κτησιφώντος*. Among private actions, a suit to recover damages for breach of contract or injury to property (*δίκη βλάβης*) is a good illustration of a *δίκη κατὰ τινος*, a *διαδικασία* of a *δίκη πρὸς τινα*: in a *διαδικασία* the parties were properly neither plaintiffs nor defendants, but rivals and competitors, and the proceedings were a contest either to shift the responsibility for a public burden such as the *χορηγία*, or *τριηραρχία*, or a State-debt, or to secure a right or privilege, as when several persons claimed an inheritance, or when families or individuals claimed a priesthood (*ιερωσύνη*), or its honours and emoluments (*γέρα*).

495. Again, all actions were either *ἀγῶνες ἀτίμητοι*, *i.e.* not requiring *τίμησις* or assessment of penalty or damages by the judges, or *τιμητοί*, requiring such assessment. There were two classes of *ἀγῶνες ἀτίμητοι*. (1) In some actions, public and private, the penalty (*τίμημα*) was determined before trial, either by law or by special decree (*ψήφισμα*), or in consequence of covenant between the parties, *e.g.* when proceedings were on a contract to which were annexed penalties for non-performance. (2) In many private actions, *e.g.* in recovery of debt or to establish title to property, no *τίμησις* was necessary after award of judgment on the fact or right.

496. *Ἀπαγωγή, ἐφήγησις, ἔνδειξις*. These actions were distinguished by two peculiarities of procedure. (1) The prosecutor was not obliged to summon his opponent to appear before the competent authority on a certain day, but either himself seized the criminal and carried him before the magistrate, as in *ἀπαγωγή*, or conducted the magistrate and his officers to the spot where the culprit was to be found, as in *ἐφήγησις*, or lodged with the magistrate a written information (*ἔνδειξις*), leaving him to effect the arrest. (2) The magistrate took steps to secure the presence of the prisoner at the trial either by committing him to gaol or by requiring three sufficient sureties (*ἐγγυηταί*) for his appearance. The law only permitted such an invasion of the liberty of a citizen in the case of certain gross and notorious offences. *Ἀπαγωγή* was allowed (1) against 'malefactors' (*κακοῦργοι*) in the technical application of the term, *i.e.* against thieves (*κλέπται*), clothes-stealers (*λωποδύται*, specially active in the gymnasia), cut-purses (*βαλαντιοσόμοι*), house-breakers (*τοιχωρύχοι*), kidnappers (*ἀνδραποδισταί*, formidable in a slave-holding society); (2) against persons labouring under any kind of disfranchisement (*ἀτιμία*),

*δίκαι πρὸς
τινα and κατὰ
τινος.*

*ἀγῶνες ἀτί-
μητοι and
τιμητοί.*

Some special
forms of public
action.

if detected exercising the rights from which law excluded them; (3) against persons banished either for homicide or political crimes, if they unlawfully returned to the country (*κατιέναι*). Probably *ἀπαγωγή* was not strictly legitimate, unless the offender was caught *flagrante delicto* (*ἐπ' αὐτοφώρῳ*). 'Malefactors' who confessed before the magistrate were executed without a trial. The Eleven had jurisdiction over classes (1) and (2), the Thesmothetae over class (3). It is noticeable that attempts were sometimes made to use *ἀπαγωγή* as a swifter and easier method of prosecuting for murder, the accused person being apprehended on a charge of violating law by trespassing on public or sacred places when stained by bloodshed; but we have no means of determining how far this interesting innovation was supported by law or public opinion. So, too, in moments of public excitement the Athenians were very ready to have recourse to this summary form of procedure to punish offences quite outside its original scope, *e.g.* to punish metoecs who left Athens at times of public danger. Little is known about *ἐφήγησις*. It could be employed against thieves, and probably was sometimes necessary, for a private citizen was not allowed to enter forcibly another man's house, even in pursuit of a criminal, and *ἐνδειξις* was apparently not applied to 'malefactors.' The range of *ἐνδειξις* was thus narrower than that of *ἀπαγωγή*. In our authorities we only read of its use against the second and third class of offenders enumerated above. An 'information' was given either to the Eleven or to the Thesmothetae.

497. The distinctive feature of *φάσις* and *ἀπογραφή* was the reward accruing to the prosecutor (for a possible exception see below), and the court-fees required in consideration of this advantage. Procedure took the normal course of summons by the prosecutor and appearance of the parties before some magistrate. A *φάσις* could be instituted (1) against those who infringed the laws regulating export and import, the customs, the corn-traffic, the silver mines of Attica; (2) against guardians mismanaging wards' estates (*φάσις ὀρφανικοῦ οἴκου*). The presiding magistrate varied according to the offence, *e.g.* cases concerning the mines and customs went to the Thesmothetae; offences against import and export laws to the Superintendents of the Emporium (*οἱ ἐπιμεληταὶ τοῦ ἐμπορίου*); while the First Archon protected the interests of orphans.

498. The application of the word *ἀπογραφή* to denote an action is derived from the meaning 'written inventory.' (1) Any citizen believing another to be in possession of State-property could enforce either surrender or proof of title in court by submitting to the Eleven a 'specification' of the said property. (2) The process was extended to assist the State in recovering debts, particularly debts on judgments in court. A State-debtor was not only *ipso facto* *ἄτιμος*, but on failure to pay by a certain date (generally the 9th Prytany of the year in which the verdict was given) his debt was doubled and could be exacted by confiscation; at this stage any private person could help or stimulate the action of the executive by presenting an *ἀπογραφή* of property alleged

to belong to the debtor, but a trial only ensued when the articles of the inventory were contested wholly or in part, or the debt denied. A share of three-quarters was the recompense of the informers according to [Dem.] LIII. 2, but this seems a surprisingly large proportion.

499. The first task of a litigant was to catch his adversary in some public place and summon him (*προσκαλείσθαι, καλείσθαι*).
 Normal course of an action, public or private. A summons (*πρόσκλησις, κλήσις*) at Athens was an oral request to appear at a stated time before the magistrate within whose province the suit lay, and was delivered by the plaintiff or prosecutor in the presence of witnesses, generally two (*κλητήρες*). The regular interval between citation and appearance is thought to have been five days. An alien (but not a citizen) could be taken at once to a magistrate (the Polemarch) and either imprisoned or held to bail. If on the appointed day the defendant did not attend, and service of summons was duly attested, he was liable to suffer judgment by default (*ἐρήμην ὀφλισκάνειν*), which however might be reversed by successful prosecution of the *κλητήρες* for false citation (*γραφὴ ψευδοκλητείας*). If both parties appeared, the magistrate had first to consider the plaint or bill of indictment (*λῆξις, ἔγκλημα*), which was submitted in writing. No doubt in theory Athenian magistrates had power summarily to dismiss an accusation for errors in form or law; but they were untrained men, with no special legal knowledge, and the danger of deposition during office and of prosecution on the expiry of their term made them apprehensive of the consequences of denying a suitor, or of appearing to trespass in any way on the prerogatives of the dicasts. They were naturally disposed to leave technical difficulties to be raised by the defendant at a later stage, and the cases, we may suspect, were not numerous in which to quash a suit was clearly safer than to entertain it. If the magistrate professed himself satisfied with the plaintiff's statement, he proceeded to require court-fees from the complainant—whether the defendant paid now or later is not known—or the *παράστασις* from a public prosecutor, or the deposit (*παρακαταβολή*), when this was necessary; and on payment made arrangements for the examination (*ἀνάκρισις*), in which the case on both sides was to be fully set forth and scrutinised. The Forty sent all suits within their jurisdiction to be examined by a public arbitrator, but otherwise the magistrate who admitted the plaint superintended the preparation of the case for trial before Heliasts. He also saw that the charge was copied out on a whitened board (*σανίς, λεύκωμα*), and exposed for public inspection in his office or some appropriate place. The appointment of a day for the examination ended the first stage of proceedings.

500. The *ἀνάκρισις* probably began with the parties taking oaths to the truth of their declarations (*ἀπωμοσῖαι, διωμοσῖαι*). The defendant, being called upon for his defence, handed in a written plea. If instead of meeting the charge by a direct

ἀνάκρισις :
παραγραφαί.

denial he alleged that the action was not maintainable (οὐκ εισαγωγίμος) on grounds of law or fact, *e.g.* because the magistrate was not competent, or because the time for legal proceedings had expired, or because the matter had been already settled by a judgment of a court or an arbitrator's award, or because a release and discharge (ἀπαλλαγή, ἄφεσις) had been given, the objection raised, if not allowed by the plaintiff, was referred to a court of Heliasts, thus giving rise to an action distinct from the original suit, which was meanwhile suspended. An exception to the plaint might take the shape of a παραγραφή or a διαμαρτυρία. The παραγραφή, a written statement, as the name imports, was the more convenient form of special plea. The burden of proof lay with the defendant, who at the trial of the issue spoke first. If he failed to convince the judges—and they were impatient of formal and technical objections—the primary action was resumed; if he succeeded, the plaintiff was or was not barred from further proceedings, according to the substance of the special plea. In a trial on a παραγραφή both parties were liable to the ἐπωβελία on failure to obtain a fifth of the votes.

501. A διαμαρτυρία was a more complex and certainly older procedure. If the defendant pleaded that the action was not maintainable, the plaintiff had the prior right to produce a witness, who deposed the contrary, that the action was maintainable, for reasons specified. The contest was then transformed into an action for false testimony (δίκη ψευδομαρτυρίων), brought by the defendant against the witness put forward by the plaintiff. But it might happen that the plaintiff did not choose to exercise his right. It was then the turn of the defendant to put forward a witness to testify that the action could not be brought into court, and of the plaintiff to take the offensive and bring an action against the defendant's witness. The effect of this secondary trial on the original suit depended, of course, on the character of the exception taken. The procedure was allowed both in public and private suits, but in our authorities is commonest in cases of disputed succession. In these, however, it is somewhat simplified. When *e.g.* sons in possession of an estate (κλήρος) availed themselves of the διαμαρτυρία to shut out claimants alleging themselves to be the rightful heirs, there was strictly neither plaintiff nor defendant. The διαμαρτυρία always took the same form, the declaration of the witness being that 'the estate cannot be claimed at law (οὐκ ἔστιν ἐπίδικος), there being lawful sons.' We find no example of a contrary declaration emanating from the other side. The burden of disproof fell on the claimants. And the consequences of the secondary action were more decisive. If the witness was acquitted, the claimants necessarily abandoned their pretensions. If he was convicted, the estate was as good as lost to the sons, but not as yet secured by the claimants, who had still to establish their own rights in court, and might in the end be ousted by new competitors.

ἀνάκρισις :
διαμαρτυρία.

502. If the defendant took the 'straightforward' course (εὐθὺδικία εἰσιέναι), denying the charge without demurrers and evasions, the magistrate's work was to collect all the articles of proof and see that they were in the proper shape, for nothing was admissible at the trial that was not in writing and had not been disclosed at the ἀνάκρισις. Law was proved by authenticated extracts from statutes, decrees, and public records. Copies of bonds (συνθήκαι, συγγραφαί), wills, accounts, etc. had to be certified by witnesses. An action was allowed to compel an adversary or any third person to produce relevant documents (δίκη εἰς ἐμφανῶν κατάστασιν). All testimonial evidence was presented in the shape of written depositions. It was usual, but not necessary, to bring the witnesses to the office to confirm their declarations. An oath, though common, was not obligatory, and was administered by the parties, not by the magistrate. At the trial, however, no depositions could be read to the Judges, unless the witnesses were present in court to signify their assent. If a witness was abroad or ill, his statement was committed to writing in presence of persons appointed for the purpose, who were required to testify to the accuracy of the document (called an ἐκμαρτυρία) before the evidence was admitted. A citizen was bound to give testimony when requested; and reluctant witnesses could be compelled by a solemn summons (κλήτευσις) either to depose or to take a public oath (at the stone of swearing in the agora) that they knew nothing of the matter (ἐξόμνησθαι); the penalty for contumacy was 1000 dr. A witness who broke an engagement to attend in court was liable to prosecution (δίκη λιπομαρτυρίου). Hearsay evidence (ἀκοὴν μαρτυρεῖν) was inadmissible, except the declarations of persons deceased. Women, minors, and disfranchised citizens were incompetent to give testimony. Neither of the parties could be witness in his own case; but they could cross-examine each other, and the answers were taken down and used at the trial.

503. The evidence of slaves could only be given under torture, and was not admitted without the consent of both parties. Hence the frequent use in legal proceedings of the 'challenge to torture' (πρόκλησις εἰς βάσανον). Slaves were often in possession of valuable information, and one of the regular artifices of litigants was to offer to give up their own slaves for examination (παραδιδόναι, ἐκδιδόναι) or to ask the surrender (ἐξαιτεῖν) of slaves belonging to their adversaries. A formal document was drafted, stating the conditions and consequences of the inquiry, e.g. whether the statement extracted should only decide some particular point in dispute; or should be taken as a final verdict ending the whole controversy and disposing of the necessity for a trial. Challenges were not serious attempts to reach a settlement, but were designed to influence the dicasts. The aim of a challenger was to construct such a proposal as would be refused, in order to be able to denounce his opponent in court for concealing the truth from fear of revelations; the opponent sought to turn the tables by an inconvenient counter-challenge, and both

sides recited to the judges commonplaces on the use of torture as an instrument to elicit truth. It is not likely that freemen were in the habit of staking important interests on the word of a slave on the rack.

504. The 'challenge to an oath' (πρόκλησις εἰς ὄρκον) was a relic of an ordeal. Trial by oath originally was an alternative to trial by witness. The Gortynian code sometimes directs that an oath of exculpation shall decide a cause. But at Athens in the fourth century this method of decision was not controlled by a magistrate, but had sunk to a matter of private arrangement between the parties. The challenge was a written proposal that the dispute should be settled, wholly or in part, by a peculiarly solemn oath to be taken, according to circumstances, either by the challenger himself or by his opponent or by some third person, who might even be a woman. Such offers were rarely sincere and rarely accepted. The risk was too great, and the 'challenge to an oath' generally indicated that the challenger had no witnesses or documentary evidence to produce. But if oratorical capital might be made out of a refusal, the recognised manoeuvre was to devise a counter-challenge that would be rejected by the adversary.

πρόκλησις
εἰς ὄρκον.

Other challenges of various kinds might be made before the hearing in court, but the two described are most prominent in the Orators.

505. As soon as both parties had marshalled their proofs or exhausted their stratagems, the examination was closed, and the magistrate took over all the papers and kept them sealed and secure until the trial. The date was settled with the Thesmothetae. The law prescribed that some suits (e.g. all cognizable by the εἰσαγωγεῖς and mining and mercantile suits received by the Thesmothetae) should be introduced into court within the space of a month from the lodging of the plaint, whence the name ἔμμηνοι δίκαι, but in general no limit was fixed, and a trial might be long delayed by the pressure of business on magistrates and dicasts, or by the success of a litigant in procuring adjournments of the ἀνάκρισις and postponements of the hearing. The magistrate or magistrates who had superintended the examination (for examination before arbitrators see § 485) presided also at the trial, supported by police, heralds, clerks, etc., and were responsible for the orderly conduct of business. When the judges were in their places and all was ready, the president called on the parties to come forward. A suitor who did not answer the summons, whether plaintiff or defendant, suffered judgment by default, unless some satisfactory explanation of his absence, such as sickness, the death of a near relative, or public duties, was presented in proper form. A person unable or unwilling to appear procured a friend or agent to swear to the truth of the alleged excuse (ὑπωμοσία) and pray for an adjournment; the other side was allowed to offer a counter-oath (ἀνθυπωμοσία), denying the facts alleged and opposing the application, and the dicasts, after hearing arguments and evidence, voted whether the petition should be granted.

The trial:
date and ad-
journments.

506. If both suitors were present, the clerk of the court read out the complaint and the rejoinder, after which the parties were called upon to address the judges, the plaintiff first, and after him the defendant. In some cases each side spoke twice. Hired advocates were expressly forbidden, every citizen being presumed by the law capable of pleading his own cause. This was too hard a rule even for Athenians, who generally had some familiarity with public affairs, and whose law aimed at simplicity, and was certainly accessible. A nervous and inexperienced speaker, after a few prefatory words, could get permission from the judges to call a friend or relation to support him (*συνηγορεῖν*). But these 'friends' never developed at Athens into professional advocates; they had always to satisfy a suspicious audience drawn from a small society that their only motive was personal feeling, even if it was nothing better than hatred of the side they opposed; and to speak often branded a man as a *συκοφάντης*. One profession only, and one peculiar art, was produced by the Athenian system, the profession and art of the *λογογράφοι*, men who made a business of composing speeches to be learned and delivered by others, and who also, no doubt, gave advice on niceties of law and procedure. But the name was a reproach, and the perfection of the composer's art was to mask his identity and disguise his legal learning. A fixed time, varying of course according to the case, was allotted to the speeches, and an official (*ὁ ἐφ' ὕδωρ*) checked the speakers by a water-clock (*κλειψύδρα*). When the orator had occasion to appeal to his proofs, the clock was stopped (*ἐπιλαβεῖν τὸ ὕδωρ*), while the clerk read out the deposition or challenge or oath referred to, and the witnesses were called up. Witnesses were never cross-examined, but a speaker could interrogate his adversary, and the judges could interrupt and question the speaker.

507. The speeches ended, officials distributed among the judges *ψῆφοι* for voting. The nature and use of the *ψῆφος* differed at different periods. The comedians of the fifth century speak of shells (*χοιρίναι*), and of a vessel of acquittal (*καδίσκος ἀπολύων*) and of condemnation (*ἀπολλύς*). In the last quarter of the fourth century, according to Aristotle, each judge received two bronze discs with a cylindrical axis (*αὐλίσκος*) running through the centre. One had a hollow axis, was called *ἡ τετραπημένη (ψῆφος)*, and was for condemnation; the other, in which the axis was solid, was called *ἡ πλήρης*, and was for acquittal. Two urns (*ἀμφορεύς*) were set on a platform (*βῆμα*), one of bronze, called 'the decisive urn' (*ὁ κύριος*), because the judge dropped into it through a narrow slit the *ψῆφος* which expressed his verdict, the other of wood, called 'the inoperative urn' (*ὁ ἄκυρος*), for the reception of the second *ψῆφος*, which was nugatory. The aim of these arrangements was to prevent frauds and ensure secrecy. It was impossible to put two *ψῆφοι* into the same urn, and spectators could not detect how a judge voted. The *ψῆφοι* in the bronze urn were publicly sorted and counted, and the number of votes on each side was proclaimed by a herald. Victory went

The trial:
speeches.

The trial:
the voting.

to the suitor who had the larger number; if the votes were equal, the defendant was acquitted. When the verdict was guilty and the case an *ἀγὼν τιμητός*, a second vote was necessary; the judges had to decide the penalty, personal or pecuniary (*τιμᾶν τί χρῆ παθεῖν ἢ ἀποτεῖσαι*). A penalty (*τίμημα*) was always named in the plaint, but a prosecutor after the announcement of the votes was sometimes induced by pity or policy to propose (*τιμᾶσθαι*) something more lenient. Thereupon the defendant made a counter-proposal (*ἀντιτιμᾶσθαι*), naming the punishment he was content to suffer, and the judges simply voted in the same way as before, for one or the other proposal. This unsatisfactory method of awarding justice was inevitable in courts constituted on the democratic model, in which the president was not a judge; if every judge out of a body of 200 or more had been allowed to suggest what he considered a reasonable sentence, the result would have been disputes, confusion, and waste of time. In a few cases the law gave the judges the discretion of imposing a specified additional penalty (*προστίμημα*), such as confinement in the stocks (*ποδοκᾶκη*) for five days and five nights, when a person had been found guilty of theft and condemned in damages, but here there was no difficulty; a judge moved to inflict the legal extra penalty, and the rest voted yes or no on the motion.

508. In public actions the punishments were either personal, *i.e.* death, selling into slavery (not used against citizens), deprivation of whole or partial of civil rights (*ἀτιμία*), or pecuniary, *i.e.* fines and confiscation. Imprisonment was not used as a separate and independent punishment, though decreed as an additional penalty in a few cases, either to accelerate payment of debts due from tax-farmers (*τελῶναι*) and lessees of public property (*οἱ μισθούμενοι τὰ δημόσια*), or as a public stigma for petty theft. Athens had only one prison (*τὸ δεσμωτήριον*, in familiar language *τὸ οἶκημα*, 'the House'), and that not very secure; and to keep convicted criminals in confinement, unless they were to be speedily executed, would have seemed to Athenians expensive and superfluous. No public feeling against capital sentences existed, and disfranchisement, followed, if necessary, by confiscation, was ordinarily an effective way of coercing State-debtors.

Penalties in private actions were pecuniary only, with one exception; imprisonment could be added in 'mercantile suits' (*ἐμπορικὰ δίκαια*) in which one of the parties was commonly a travelling foreign merchant (*ἔμπορος*), who, if defeated, might slip away to avoid payment, and, if victorious, could not be expected to stop at Athens to combat the delays of a fraudulent debtor.

509. In public cases the sentence was carried out by magistrates, *e.g.* the Eleven superintended executions, the *πωληταί* sold confiscated estates, the *πράκτορες* registered and got in debts. In private cases the rule was self-help; no public officer gave assistance in execution of judgment. The court or the law named a period within

Penalties.

Execution.

which the damages were to be paid or the property surrendered (ἡ προθεσμία sc. ἡμέρα). If the defendant did not comply by the appointed day, he was said to be ὑπερήμερος, and his adversary had the right to seize and, if necessary, sell movables (ἐνέχυρα λαβεῖν, ἐνεχυράζειν) in discharge of the debt, or to take possession of real property by formal entry (ἐμβαστεύειν). A remedy against resistance was given in an action for ejectment (δίκη ἐξούλης). A judgment-debtor condemned in this action was treated as a public offender; he incurred a fine to the State equal in value to the damages or property the plaintiff was seeking to recover, and could escape the painful disabilities attached to a state-debtor only by satisfying both the plaintiff and the State. Some scholars think that an action for ejectment could also be brought as a substitute for proceedings by way of distraint or entry, non-payment being interpreted to constitute ejectment, and that this was the only course open, if no visible effects existed, execution against the debtor's person being unlawful.

510. There was no appeal from dicasts, for no superior jurisdiction existed. But their decision could be set aside on two pleas.

Reversal of judgment.

(1) A litigant who had lost his case through non-appearance in court, might within two months apply for a new trial (τὴν ἔρημον ἀντιλαγχάνειν, but, when an arbitrator's award was assailed, τὴν μὴ οὖσαν ἀντιλαγχάνειν). (2) A judgment might be suspended and eventually annulled by prosecuting witnesses for false testimony (δίκη ψευδομαρτυρίων), provided that notice of prosecution (ἐπισκῆπτεσθαι ταῖς μαρτυρίας, to 'denounce' the evidence) was given in court before the judges began to vote.

Der attische Process, by M. H. E. Meier and G. F. Schömann, re-edited by J. H. Lipsius. Berlin, 1883-87; in four books, the first three superseded by J. H. Lipsius, *Das attische Recht und Rechtsverfahren*. Leipzig, 1905-12. *Recueil des Inscriptions Juridiques Grecques*, by R. Dareste, B. Haussoullier, Th. Reinach. Paris, 1891-1904. *Histoire du Droit Privé de la République Athénienne*, by L. Beauchet. Paris, 1897. 4 vols. (A systematic exposition of the contents of the law.) *Lehrbuch der griechischen Rechtsaltertümer*, by Th. Thalheim. Leipzig, 1895. *Le Droit pénal de la République Athénienne*, by J. J. Thonissen. Brussels and Paris, 1875. *Das Stadtrecht von Gortyn und seine Beziehungen zum gemeingriechischen Rechte*, by J. Kohler and E. Ziebarth. Göttingen, 1912. Also articles in Pauly-Wissowa, *Real-Encyclopädie* and Daremberg et Saglio, *Dict. des Antiquités*.

VI. 3. FINANCE.

511. It will be convenient to review the methods of Greek finance under the following heads: I. City States. II. Federations. III. Territorial monarchies. IV. Temples.

I. Although we do not know in detail the financial practice of any city State except Athens, the information supplied by Aristotle, by the author of the pseudo-Aristotelian treatise on *Economics*, and by a large and growing stock of inscriptions, makes it possible to assert certain principles which underlay the general usage of city State finance.

City States.
General
principles.

Except in a few States which maintained a large staff of paid officials, or a fleet in permanent commission, the normal expenses of government were small. These expenses, moreover, were frequently curtailed by the custom of transferring certain public obligations or liturgies from the State to individuals (see § 515). Hence the revenue required in ordinary times was inconsiderable. In view of the smallness of the sums involved, comparatively little care was bestowed in most city States on financial administration. It was an uncommon thing to appoint a special ministry of finance, or to take a general survey of income and expenditure in the form of annual budgets; and hardly any attempt was made to accumulate reserve funds against a time of crisis. The imposts were for the most part of a simple character, so as to offer no great difficulty in assessment or collection. A large proportion of the revenue was usually derived from indirect taxes such as market dues and customs. These were frequently, though not invariably, levied at a uniform low rate, 2% being a common figure. No distinction was made for fiscal purposes between imports and exports, and differential tariffs for the protection of home industries are altogether unheard of. As a source of ordinary revenue direct taxation in the form of a land tax or of a general property tax was avoided, but percentages were frequently levied on the profits of trades. Some States also derived a large revenue from rents accruing from State properties, such as lands, houses and fisheries, and from royalties on the produce of mines. The collection of taxes was for the most part left to companies of contractors, to whom the right of collection was assigned by public auction, usually for the term of one year. On the other hand much care was bestowed on the keeping of accurate accounts, so that misappropriations of public money must in theory at least have been very difficult of execution.

There is no clear evidence of taxes being fixed at progressive rates, so as to place a relatively heavier burden on the rich. But it is probable that the poorest class of citizens at Athens and elsewhere were exempt from the

general property-tax (§ 514). Moreover the liturgies which the wealthy had to perform, and the free contributions (*ἐπιδόσεις*) which they were expected to offer in times of special need, more than made up for the absence of progressive ratings. Additional burdens in the form of a poll tax or trade-licence were laid on foreigners. It will also be noticed that the selection of taxable objects was generally so contrived as to favour the small land-owners as against the traders. The payment of taxes in kind, which was still in use during the sixth century (as in the case of the 10% impost levied by Peisistratus on the produce of Attica), had in the following century been generally superseded by money contributions.

Extraordinary expenditure, frequently necessitated by the fondness of the city States for war, and by their improvidence in not building up reserve funds, was sometimes met by the imposition of a general property tax (*εἰσφορά*). But recourse was often had to expedients which purchased a momentary convenience at the price of much ultimate harm. Of these devices the most reputable were a loan from another State or, more often, from a temple treasure (§ 521), an appeal for special subscriptions by rich citizens, or the creation of State monopolies. But the list of financial makeshifts also includes depreciation of coinage, compulsory loans, confiscations and other ruinous exactions.

512. Among Greek city States the finances of Athens are at once most important and best known. The principal charges upon the public purse were as follows:

(1) The maintenance of the army and navy. Although the upkeep of the warships was made a liturgy and so did not devolve upon the State, the provision of new vessels and the payment of the crews, which absorbed $\frac{1}{2}$ —1 talent for each ship in every month, constituted a heavy item of expenditure, even in times of peace (about 250 t. per annum in the time of Pericles). The army was a less costly institution, as only a small fraction of the total forces was permanently embodied. But the large sum of 40 talents was expended yearly on the horsemen. In times of war the cost grew disproportionately, owing to the high rates of pay (1—2 drachmas per day). The campaign of 440—39 B.C. against Samos is computed to have consumed 15—1600 t., and the siege of Potidaea (432—30 B.C.) absorbed 2000 t. (2) The upkeep of fortifications, harbours and other public works. Much care was bestowed on these even in normal times. The special expenditure of Pericles on new constructions was enormous: his buildings on the Acropolis alone cost over 2000 talents. (3) Payment for public service. In the fifth century wages were paid to 500 members of council, to 6000 jurors, and to 1400 public officials. About 390 B.C. a fee was also paid to citizens attending the Ecclesia. The amounts were at first small (1—3 obols a day for jurors), but the pay for attending the Ecclesia, which was the most considerable item, was raised to 6 and for some meetings to 9 obols. The expenditure eventually grew so high that one of the first measures of reform introduced after the Macedonian

conquest (321 or 317 B.C.) was the reduction of public salaries. (4) The celebration of public festivals. The outlay upon these was largely defrayed by means of liturgies (§ 515). But a serious expenditure was incurred in the distribution of pocket-money from the public purse to holiday-makers. In the days of Pericles, who introduced these 'theoric' bounties, payment was made at a low rate (2 obols a day) and was confined to the Dionysia, in the fourth century disbursements were made at most or all of the festivals, which were specially numerous at Athens. Thus Demosthenes (1. 19) could argue that the diversion of the 'theoric' funds into the war chest would constitute a decisive increment to the military resources of Athens. In 321 or 317 B.C. 'theoric' pay was abolished. (5) Minor expenses, which included the maintenance of 300—1200 public slaves as a police force; the payment of poor-law relief (2 obols a day; the δωβελία instituted by Cleophon c. 410 B.C. was a temporary expedient); and the graving of public inscriptions.

513. The ordinary items of revenue were:

(1) The royalties on the mines of Laureium, which were worked intensively since the time of Peisistratus and from 483 B.C. contributed substantial sums to the exchequer. Athens.
Revenue.
 (2) The duties levied at Peiraeus on imports and exports, at a normal rate of 2% (πεντηκοστή). In 401—400 B.C. these brought in a net revenue of 30—36 t. But in periods of commercial prosperity the proceeds may well have stood at double or treble this amount. (3) Market dues (ἐπώνια), usually at the rate of 1%. The yield of this tax must have been considerable, for Athens in the fifth century had become an emporium for the produce of half the Mediterranean and of the Black Sea. (4) A harbour toll (ἐλλυμένιον) of unknown amount. This impost must also have produced a large sum, for practically all the trade of Athens was waterborne. (5) An octroi (διαπύλιον), probably levied at the gates of Athens. Perhaps this served as a substitute for customs duties on the land frontier. (6) Various minor imposts, such as the poll tax on resident aliens (μετοίκιον) at 6—12 drs., the fees paid by non-citizens for the right of trading (ξενικὸν τέλος), and the proceeds of judicial fines and confiscations. The yield of the μετοίκιον stood in 309 B.C. at not less than 20 t., for in this year 10,000 aliens were officially registered, and this total probably comprises adult males only; the yield in the fifth century cannot be determined, but was probably not less. (7) Fines and confiscations must at times have produced a large revenue, and it is even alleged that Athenian juries dealt severely with prisoners in the hope of thus easing the public finances.

In addition to these sources of income, the Athenians during the second half of the fifth century had at their disposal the tribute from the members of the Delian League. The transference of the Tribute. federal treasury to Athens in 454 B.C. soon led to the fusion of imperial and Attic finances, and appropriations of federal funds to Athenian purposes became a regular practice. The amount of the tribute, which in

477 B.C. is said to have been 460 t., subsequently fluctuated a good deal; but eventually it underwent progressive augmentations, and in 425 B.C. it was assessed at 960 t. After the peace of Nicias the yield is stated to have exceeded 1200 t. (Andocides 3. 9). In 413 B.C. a system of indirect taxation was introduced in place of the tribute (§ 519) in the hope of increasing the income from the allies, but the gradual disruption of the League soon cut off this source of revenue. A further imperial impost may be found in the *δεκατή*, which was probably a tithe levied on all ships passing through the Bosphorus. Taken altogether, these imperial exactions more than doubled the income of Athens.

514. In times of emergency the normal revenue was supplemented by various expedients. During the fifth century the commonest Extraordinary Revenue. practice was to contract a loan from a temple treasure (§ 521). Failing this resource, appeals were issued for free contributions, to which both Athenians and foreign sympathisers sometimes contributed. But the chief extraordinary source of income was the property-tax (*εἰσφορά*), the first levy of which is recorded in 428 B.C. (Thuc. III. 19), when a sum of 200 t. was collected by this means. In 378—7 B.C. improved arrangements were made for the assessment of the burden, which had hitherto been left to be settled between the individual tax-payer and a board of assessment commissioners (*ἐπιγραφεῖς*). A census of land, houses and other property in Attica was taken, so that the Ecclesia in fixing the amount of the Eiphora might know what percentage of the national wealth it was exacting, and so might save itself from imposing an excessive rate. The total declared value was 5750 t. (Polyb. II. 62. 7, confirmed by Dem. 14. 30). The property of the poorer citizens was probably not included in this valuation, and no doubt much wealth was concealed or undervalued. Furthermore the work of individual assessment was now made to devolve upon groups of tax-payers (*συμμορίαί*), 100 in number, each of which possessed an approximately equal aggregate of wealth and contributed an equal quota of the sum required. The members of each group were left to distribute the burden imposed upon it among themselves. For this purpose they appointed a president (*ἡγεμόν*), usually their richest member, and a registrar (*διαγραφεὺς*) who made out the amount due from each individual. The collection of the Eiphora, which at first had been in the hands of State officials (*ἐκλογεῖς*) was made over about 374 B.C., as a liturgy, to the 300 richest citizens, who paid in advance (*προεἰσφορά*) the full amount of the tax and recovered as best they could from the other members of their respective symmories. The list of the 300 was originally drawn up by the Council; subsequent alterations in it were probably effected by *ἀντίδοσις* (§ 515). In the fourth, probably also in the fifth century, both real and personal estate was taxed, and corporate property was also subject to the impost, but the poorer citizens were exempt. The question whether the Eiphora was a uniform or a progressive tax cannot be answered definitely. Probably differential rates were in force, and in the fifth century at least the

Solonian classes were no doubt used as a basis, but the method of differentiation is quite uncertain.

The total revenue of Athens amounted in 431 B.C. to 'not less than 1000 t.' (Xen. *Anab.* vii. 1. 27). In 422 B.C. this total had been nearly doubled (Ar. *Vesp.* 660). By 346 B.C. the public income had sunk to 400 t. and in an unspecified year of the fourth century only 130 t. were collected (Dem. 10. 37). On the other hand in 338—326 B.C. not less than 1200 t. were levied annually, and in 317—307 B.C. the same total was attained. In times of war the revenues often fell far short of requirements, but under normal conditions they covered all necessary expenditure, and in the age of Pericles they usually provided a handsome surplus.

515. The various 'public services' (*λητουργίαι*) may be considered under the head of revenues, in so far as they relieved the exchequer of considerable expenditure. The best known regular 'liturgies' are *χορηγία*, *γυμνασιαρχία*, *ἐστίαισις*, *ἀρχε-θεωρία*. The first was the obligation to collect, maintain, instruct, and equip one of the many choruses needed for the dramatic and musical and orchestric competitions at the great festivals. For example, at the City Dionysia 3 tragedies, 5 comedies, and 10 dithyrambs were performed, so that 18 choregi had to be found. The expense varied according to the nature of the competition and the ambition of the choregus; we read of 3000 dr. spent on a tragic chorus, 1600 dr. on a comic chorus, 1500 dr. and 300 dr. on a cyclic (*i.e.* dithyrambic) chorus. The task of the *γυμνασιαρχος* was to keep and train a team of men to represent his tribe in the torch-races (*λαμπαδηδρομίαι*) associated with some festivals, *e.g.* the Panathenaea and the Hephaestiaeae; 1200 dr. might be spent. The *ἐστιάτωρ* had to feast his tribe, doubtless on some religious occasion; what this cost is not recorded. The *ἀρχεθέωρος* was the head of a sacred embassy sent in the name of Athens to some festival outside Attica, *e.g.* to Delos or Olympia, or to consult the oracles at Delphi and Dodona. The expense of such embassies was partly borne by the State, but prominent men sometimes spent lavishly to maintain the dignity of their country. In the age of Aristotle the choregi for tragedies and the *ἀρχεθέωρος* were appointed by the Archon; the rest were nominated by their tribes. These burdens were only laid on men whose property was 3 t. or more. No one could be compelled to take more than one 'liturgy' in the same year, or the same 'liturgy' twice, or to serve in two successive years. Anyone who thought his nomination unfair had a remedy (called 'exchange' (*ἀντίδοσις*) from one incident in the procedure), provided he could fix on some definite person on whom the burden ought to have been imposed. He could challenge that person to take the 'liturgy' or exchange properties. If no compromise was reached, the dispute was taken before a court of judges, who heard inventories and arguments, and assigned the burden to the party whom they considered more fit to bear it.

Total revenue.

The ordinary liturgies.

516. The duties attached to the office of trierarch are a remarkable illustration of the demands made by the Athenian democracy on the patriotism of the rich. The State provided the ship and all necessary equipment (*τὰ σκεύη*), and was supposed to pay the crew and petty officers. The legal obligation of the trierarch was to get the vessel launched and ready for service, to keep it efficient while at sea, and on the expiry of his term to hand over everything, hull, fittings, and tackle, in good condition, or pay damages, if he could not prove in court some valid plea, such as storm or battle. In practice trierarchs often did more, from ambition or public spirit, or because the State failed in its duty. The responsibility and dangers of such a post were serious enough in themselves, apart from the expense, which normally ranged from 40 to 60 minae for a year's command. At the beginning of the Peloponnesian war the Generals were able to nominate annually 400 men rich enough to maintain one ship each for a year. After the Sicilian disaster it became necessary to allow two persons (*συντριήραρχοι*) to divide between them the service and the charges. In 357—6 B.C. the law of Pericles adapted to the trierarchy the system of companies already used for the *εἰσφορά*. The 1200 richest citizens were distributed into 20 companies of 60 members each. The poorer members in each company were formed according to their means into contributory groups (*συντέλειαί*) of 3, 5, 6 or 7, each set of contributors (*συντελεῖς*) being responsible for one ship. The actual commander was chosen from the group by the Generals in conjunction with 'The Twenty,' who were probably the superintendents (*ἐπιμεληταί*) of the companies. The plan was a failure, according to Hypereides and Demosthenes. The richer members, who had been put at the head of the companies, arranged themselves in groups in their own interests, so that men wealthy enough to undertake a ship by themselves escaped with a payment which was only $\frac{1}{8}$ th or $\frac{1}{10}$ th of their proper share. Demosthenes in 340—39 B.C. carried a law to remove this abuse, and to secure that each member should contribute in proportion to his property, but the details of his scheme are unknown. The census required for the trierarchy in its various forms is nowhere stated. *ἀντίδοσις* was allowed, and in the fourth century no one could be compelled to serve more than once in three years.

517. The administration of the finances was chiefly vested in the Council. This body usually possessed no expert knowledge, and owing to the annual changes in its membership it could not ensure continuity of policy. But its duties called for little exercise of discretion. The distribution of revenue was largely regulated by means of appropriations which in the fourth century at least were established by law (I. G. II. 38, ll. 20—22), e.g. court fees and fines were set apart for the payment of jurors. Since 435—4 B.C. surpluses were paid automatically into the treasury of Athens (Hicks and Hill 49, ll. 49—51: in spite of repeated attempts to assign this inscription to 420—417 B.C., the date given above seems well established); in the fourth century they flowed

The trierarchy.

Financial administration.

either into the theoric or (from 339 B.C.) into the military chest. The chief discretionary functions of Council were to adjudicate contracts to tax-farmers, and to advise the Ecclesia about the levying of Eispnora and about the disposition of unappropriated funds (*ἐπέτεια*). On the other hand its routine work was heavy, for it supervised the operations of all financial officials and was ultimately responsible for the proper auditing of all accounts (see § 458). During the fourth century the control of finance tended to pass into the hands of individual citizens who had made a special study of the subject. From 354 and probably on to 339 B.C. Eubulus assumed a general supervision of the various financial officials (Aeschines 3. 25), and from 338 to 326 B.C. Lycurgus wielded a similar power. Eubulus probably exercised this authority as a member of the theoric board, and Lycurgus as a treasurer of the military chest, for the holders of these offices possessed a co-ordinate control with the Council over financial policy (*Ath. Pol.* 47, § 2; 49, § 3). In 321 B.C. the control of all finance was centralised under one or more magistrates *ἐπὶ τῇ διοικήσει*, whose office survived into the second century B.C. (I. G. II. 453). All the above-mentioned officials were appointed by election, and as their term of office was frequently renewed, they were able to acquire a continuous experience in administration.

518. The departmental officials, who were appointed by lot and therefore seldom consisted of specialists, were numerous and varied. The collection of revenue was indeed largely left over to tax-farmers, through whose agency all indirect imposts were received, and the levying of Eispnora was eventually made into a liturgy (§ 514). On the other hand no attempt was made to reduce the financial staff by the institution of a central exchequer in which all public monies might be kept. Each spending department possessed a chest of its own, the keeping of which required a special official. Hence the number of departmental treasurers (*ταμίαι*) defies computation. It will suffice here to mention the most important of these functionaries. Ten Hellenotamiae received the tribute from the Delian League in the fifth century. Ten *κωλακρέται* collected the court fees of litigants. Ten *πράκτορες* levied the fines imposed by the courts. Ten *πωληγαί* received the rents and royalties on the State property, and the instalments (*καταβολαί*) of purchase-money from the tax-farmers. The same officials also sold confiscated property by auction. The monies taken in by these and all other collectors were paid over to ten receivers-general (*ἀποδέκται*), who proceeded to apportion the revenue among the various departments according to the statutes on appropriations and the disposition of the Council, which supervised the entire work of distribution. Disbursements from the departmental chests were made by the respective treasurers according to standing orders, or by special authorisation of the Council or Ecclesia. The *ταμίας τῆς βουλῆς* and the *ταμίας τοῦ δήμου* defrayed the petty cash expenses arising out of the meetings of these bodies. The

Financial
officers.

theoric board paid the State contributions to the national holidays. Military expenses were charged in the latter half of the fifth century upon the Hellenotamiae; in the fourth century they seem to have been paid by the ἀποδέκται until about 338 B.C., when a special keeper of the war chest (ταμίας τῶν στρατιωτικῶν) became the paymaster of the Strategoi.

A remarkable feature of Athenian finance was the care bestowed upon the control of accounts. Every official who handled public money was required to keep a record of all his receipts and expenses and to submit them to account (§ 453).

Control of
accounts.

519. II. The finances of the federations were simpler than those of the city States, for their expenditure could almost be comprised under a single head, the maintenance of armies and navies. In the more rudimentary leagues, such as the Peloponnesian League, no regular financial authority is found until the end of the fifth century: presumably each federating State paid the expenses of its contingent out of its communal funds. In the Boeotian League of the fifth century B.C. the federal government had acquired the right of imposing taxes on the federating districts (§ 435).

Federations.

Peculiar conditions governed the finances of the Delian League. Owing to the scale of its military operations it required a revenue of exceptional size. Until 413 B.C. taxation took the form of a fixed impost (φόρος) levied on all members of the League save a small and diminishing number who contributed men and ships in lieu of money. The rates of the tribute were determined in the first instance by the general assessment of Aristeides; subsequently they were revised by special commissioners (τακταί) appointed as a rule at intervals of four years. The collection of the tax was left in the hands of the local authorities. In 413 B.C. the φόρος was commuted into a 5% duty on imports and exports, which was levied by special federal officials (εἰκοστολόγοι) in the ports of the various States (§ 513). At the foundation of the League the disposition of this revenue rested with the federal parliament at Delos. But from the first the assessment of tribute was in the hands of Athens, and the Hellenotamiae or treasurers of the federal chest were always Athenian officials. After the transference of the treasury from Delos to Athens in 454 B.C. control of the League's funds was usurped by the Athenian Ecclesia, by whose decree henceforth all federal taxes were imposed and all payments were made. Accordingly the Athenians were enabled without any constitutional hindrance to appropriate the handsome surpluses which eventually accrued to the League (§ 513).

The finances of the second Athenian Confederacy in so far resembled those of the first League that a common treasury was again established at Athens. But the control of the funds and the assessment of contributions (συντάξεις) was under the joint control of the Athenian Ecclesia and the Congress of the allied cities. Moreover the effective revenue of the League,

barely sufficed to cover expenditure, so that appropriation of surpluses by Athens was no longer possible.

In the Achaean League a federal treasury was established for the maintenance of a permanent army. Considerable disbursements out of this chest are recorded (Polyb. v. 1. 11), and mention is made of an *Eisphora* (Polyb. iv. 60. 4) and of fines as means of raising revenue. The method of collection was probably by requisition and not by direct levy, and it is doubtful whether any special financial magistrates were appointed except a board of Accountants (*δοκιμιστῆρες*).

520. III. The finances of the territorial monarchies in the post-Alexandrine age were on a far higher scale than those of the city States. The upkeep of large fleets with heavy tonnage, and of highly paid and well equipped armies, the maintenance of luxurious courts and the lavish patronage bestowed upon artists and men of learning, caused a great rise in expenditure. But the revenues more than kept pace with this increase. Antigonus Monophthalmus enjoyed an income of 11,000 t., and Ptolemy Philadelphus raised 11—14,000 t. yearly. The public income was derived from customs dues, rents from crown lands, which in the empires of the Seleucids and Ptolemies were very extensive, taxes or tithes on freeholds, royalties from mines (e.g. in Macedonia), and the sale of monopolies in banking operations and in the production of oil and paper (in Ptolemaic Egypt). In the kingdoms of Syria, Pergamum and Macedonia regular contributions were also exacted from the dependent cities (*φόρος, εισφορά, σύνταξις*), and special levies were imposed for the conduct of wars (e.g. *Γαλατικά*) and the celebration of notable events. In Egypt petty imposts, direct and indirect, were established in great variety: some 218 different kinds of payment are recorded. Lastly, certain public obligations, such as the maintenance of canals and dykes, were met by 'liturgies' of compulsory labour. Little is known of administration, except in Egypt. Here the finances were under the supervision of a central *διοικητής*, one of the king's chief ministers. The officials under his control were not co-ordinated in many separate departments, but constituted a hierarchy of three grades, viz. village, district and county functionaries. Revenue, which was partly paid in kind, according to the old Pharaonic system, but consisted mainly of money payments, was mostly collected by farmers. The residue was levied by public collectors (*οικονόμοι*). The money proceeds were paid over into the government bank or one of its numerous district branches, and this in turn paid out at the order of the central or district *διοικητής*. The central bank received all district surpluses and either paid them into the treasury (*θησαυρός*) or lent them out on interest. These operations were facilitated by the extensive use of money of account, which largely superseded cash payments. The movement of public monies was controlled by an elaborate system of audits. The revenue accounts of the farmers were overhauled by the *οικονόμοι*, and general accounts were drawn

up by a central *ἐκλογιστής* and by district officials of the same name. The king's 'civil list' (*ἴδιος λόγος*) was kept distinct from the government monies, and was administered by a special functionary.

521. IV. Many Greek sanctuaries derived a considerable income

Temples. from domains, State subventions, dedications and offertories, and their funded wealth grew to such dimensions as to require a special board of administrators. As most Greek States exercised a right of borrowing from temple-monies for public purposes, the treasurers were commonly appointed by the community and stood under State control. But the accounts of the sacred funds were always kept separate. The discovery of many such accounts at Athens, Delphi, Delos and elsewhere has made it possible to study temple finance in detail.

Athens. At Athens vast wealth accumulated during the fifth century in the shrine of Athena Polias. The ordinary revenues of the goddess, which consisted of rents, fines and tithes of confiscated property, and amounted to some 50 t. yearly, were then greatly augmented by tithes of booty from the Persian Wars. From 454 B.C. Athena was endowed with $\frac{1}{60}$ th part of the Delian League tribute; about 435—4 B.C. she received 3000 t. (Hicks and Hill 49, l. 3), probably as a repayment from the League funds of loans previously made; and from the same year she took on deposit the annual surpluses of tribute (*ibid.*, l. 51) and (perhaps also since 435—4 B.C.) any other unallocated revenues (I. G. I. 188, l. 3). In 431 B.C. her treasury contained 6000 t. in specie alone (Thuc. II. 13). On the other hand Athena's funds were always liable to be diverted to profane purposes, for by means of a special vote of indemnity (*ἄδεια*) the Ecclesia could empower itself to borrow sums at a low rate of interest (the computations in Hicks and Hill 62 indicate an annual rate of 1·2%). In the Peloponnesian War full use was made of these powers. Between 433—2 and 423—2 B.C. 4750 t. were borrowed (I. G. I. 273, fr. h.), and soon after 412 B.C. a special reserve of 1000 t. was exhausted. The failure of the Athenians to repay these loans, and the loss of her special revenues after the war, reduced Athena to comparative poverty. The finances of the goddess were administered by ten *ταμίαι τῆς θεοῦ*, who were appointed by lot out of the entire citizen body (*Ath. Pol.* 47, § 1).

The treasuries of the other gods of Athens, which were consolidated in 435—4 B.C. under a board of *ταμίαι τῶν ἄλλων θεῶν* (Hicks and Hill 49, ll. 12—18), were also well endowed, for between 433—2 and 423—2 B.C. no less than 768 talents were borrowed from this fund. The office of the *ταμίαι τῶν ἄλλων θεῶν* appears to have been merged after 343—2 B.C. in that of the *ταμίαι τῆς θεοῦ*. The sanctuaries of Eleusis contained a fund under the management of seven *ἐπιστάται* and two *ταμίαι*, who were elected by the Athenians for terms of four years. Towards the end of the fifth century 10 talents of coined money had accumulated.

At Delphi Apollo enjoyed a large revenue from the rents of pasture lands, from highway tolls (*δεκάται*), and above all from the offerings of

pilgrims. The administration of the funds was entrusted to eight *πρυτάνεις*, who apparently acted as receivers and paymasters-general, subject to the control of the Council and Ecclesia of Delphi. Delphi town. In 369 B.C. their functions were partly transferred to a board of *ναοποιοί* appointed by the constituents of the Amphictyonic synod. The chief duties of the *ναοποιοί* were to collect subsidies for the rebuilding of Apollo's temple and with part of the proceeds to construct and maintain the new shrine. From 339 to about 326 B.C. a further board of *ταμίαι* was instituted by the constituent cities in order to collect the fine imposed in 346 B.C. upon the Phocians, and to supplant the *πρυτάνεις* as paymasters-general. Thus the tendency at Delphi in the fourth century was for the temple finances to be emancipated from the control of the secular authorities.

The management of the treasury of Apollo at Delos is illustrated by a long series of inscriptions ranging from 315 to 166 B.C. These include inventories, contracts, departmental accounts and general balance sheets, and taken altogether afford a fairly complete conspectus of temple finance. The chief sources of Apollo's income were (i) rents of houses and plough land, amounting in all to 8700 drs. per annum; (ii) customs, harbour and fishing dues, which had been conceded by the city of Delos to the sanctuary and were farmed for the latter by *τελωῶναι*; (iii) interest on numerous loans issued to public and private borrowers at a uniform rate of 10% for a five years' term; (iv) special subsidies paid from the municipal chest of Delos; (v) dedications by Hellenistic kings and others. The main items of expenditure were the upkeep of the temple, payment of salaries, the performance of sacrifices and the celebration of festivals. The treasury was also obliged to lend out money, apparently without interest, to the city of Delos, and although securities were exacted on this as on other loans, it is doubtful whether repayment could always have been enforced. But in normal years the revenue, amounting in all to 27,000 drs., exceeded the expenditure by 6000 drs. Hence we find that about 200 B.C. a fund of 60,000 drs. had accumulated. The administration of the chest, which in the fourth century had been under Athenian officials (Hicks and Hill 104), was entrusted from 315 to 166 B.C. to two Delian magistrates known as *ιεροποιοί*, who were appointed, probably by election, for one year at a time. The business of the *ιεροποιοί* was extensive, for they received and paid out all monies and had the sacred chest (which consisted of a number of earthenware jars) in their keeping. But their discretion was strictly limited. No money could be deposited or withdrawn by them except in the presence of their secretary, the Secretary of State, and the Council of State as represented by the Prytaneis. The Council sitting *in pleno* supervised the annual taking of stock and checked the accounts of the outgoing treasurers. The Ecclesia had the sole power of authorising disbursements not sanctioned by standing orders. In Delos, as in Athens, the 'sacred' and 'public' chests were kept apart for purposes

of accounting, but in practice the sacred chest might be regarded as a State bank whose chief function was to lend its funds to the government in times of emergency.

Boeckh-Fränkél, *Staatshaushaltung der Athener* (Berlin, 1886); Riezler, *Über Finanzen und Monopole im alten Griechenland* (Berlin, 1907); Bibliography. Francotte, *Les finances des cités grecques* (Paris, 1909); Swoboda, *Über griechische Schatzverwaltung* (*Wiener Studien*, 1888, pp. 178-307; 1889, pp. 65-87); Guiraud, *Études économiques sur l'antiquité* (Paris, 1905), pp. 77-120; Szanto, *Anlehen griechischer Staaten* (*Wiener Studien*, 1885, pp. 232-52; 1886, pp. 1-36); Gilbert, *The Constitutional Antiquities of Sparta and Athens*, pp. 328-76; Cavaignac, *Études sur l'histoire financière d'Athènes* (Paris, 1908); Kahrstedt, *Forschungen* (Berlin, 1910), pp. 207-33; Ed. Meyer, *Forschungen*, II. (Halle, 1899), pp. 88-148; Wilcken, *Ostraka*, I. (Leipzig, 1899), chs. 4-6; Grenfell and Mahaffy, *The Revenue Laws of Ptolemy Philadelphus* (Oxford, 1896); Steiner, *Der Fiskus der Ptolemäer*, vol. I. (Leipzig, 1913); Bourguet, *L'administration financière du sanctuaire pythique* (Paris, 1905); Homolle, *Les archives de l'intendance sacrée à Délos* (Paris, 1887); and the financial inscriptions in the *Bulletin de Correspondance Hellénique* for 1889, 1891, 1903-5, 1907-8, 1910-11.

VI. 4. POPULATION.

522. IT is not possible to form a very accurate estimate of the population of the ancient Greek States. The modern conception of statistics was unknown to them: such records of population as were kept had a practical, not a scientific aim: they showed how many persons in a given district were possessed of certain rights or liable to perform certain duties. We learn the numbers of fully qualified citizens or heavy-armed men in a particular State: but as to the numbers of the women and children, of the slaves, and of the free men not included under the heads mentioned, we get little or no reliable information. Again, a frequent cause of error is introduced by the Greek system of numerals, which was such as to lead easily to mistakes in copying (*e.g.* μ stood both for 40 and for 10,000, and δ , the symbol for 4, is apt to be confused either with $\delta\upsilon\omicron$ or with $\delta\acute{\epsilon}\kappa\alpha$). Conclusions must therefore be based on the evidence as a whole rather than on particular passages: and any view which may be adopted will leave discrepancies in the authorities which cannot be satisfactorily explained. The nature of the evidence and the difficulties involved will appear from a statement of the question as to the population of Attica, with regard to which we have considerably fuller information than is forthcoming in the case of the other Greek States.

Nature of the evidence.

523. From at least the fifth century onwards official registers of various kinds were kept at Athens, as was no doubt the case elsewhere in Greece. The most important of these were (1) the *φρατερικὸν γραμματεῖον*, a register kept by the *φρατρίαί*, in which the names of all children born of citizen parents were inscribed soon after birth; (2) the *ληξιαρχικὸν γραμματεῖον*, a register kept by the officials of the demes, in which the names of all male citizens who had reached the age of 17 were inscribed, and from which was compiled the list of citizens entitled to vote in the assembly (*πίναξ ἐκκλησιαστικός*); (3) the *κατάλογος*, a register of the male citizens between the ages of 18 and 60 who belonged to one of the three higher property classes, and were therefore qualified by their wealth to serve in the cavalry or heavy-armed infantry. The statements made by Thucydides as to the military strength of Athens were derived no doubt from the *κατάλογος*, and other statements purporting to give the total number of male citizens may perhaps be referred back to the *πίναξ ἐκκλησιαστικός*. From the latter part of the fourth century onwards (4) lists were kept showing the number of *ἐφηβοί*, or youths of the wealthier classes who entered yearly on a course of preliminary military training. Considerable fragments of the lists of *ἐφηβοί* have been preserved, but these are of little use for determining the total population, as the proportion of citizens who underwent this special training is unknown, and probably varied from time to time. Finally it is recorded that under the rule of Demetrius Phalereus (317—307 B.C.) a census was taken which included not only the citizens and the metics, but also the slaves.

Official registers at Athens.

524. The census of Demetrius is said to have shown 21,000 citizens, 10,000 metics, and 400,000 slaves (Athenaeus, vi. p. 272 B). The number of citizens here given is in agreement with the statement of Plutarch that in 322 B.C., when the franchise was withdrawn from citizens possessing less than 2000 drachmas, 12,000 were disfranchised, while 9000 retained their rights. Other notices from the latter part of the fourth century agree in fixing the number of citizens at about 20,000, and this may be accepted as approximately correct. The number of Athenian citizens in the middle of the fifth century B.C. would appear to have been considerably larger. The most important evidence for this period is derived from Thucydides (ii. 13), who states that at the opening of the Peloponnesian War the Athenian forces included 13,000 hoplites ready for service in the field, and 16,000 hoplites, consisting of the oldest and the youngest citizen-soldiers and of the metics, who were available for garrison duty in Attica. The number of the metics who served as hoplites was at this date about 3000 (Thuc. ii. 31). It thus appears that Athens was able to provide from her own citizens a heavy-armed force of 26,000 men, divided into a field army and a reserve army of equal strength. If to these are added the cavalry, and the citizens of hoplite census who were engaged in garrison duty abroad, or were

Number of Athenian citizens.

exempt from military service through age or through physical infirmity, it would seem that the total number of male citizens of the three upper property classes may have amounted to about 35,000. The number of citizens of the lowest property class, the Thetes, can only be conjectured. It is probable however that they formed less than half of the whole population; and it has been suggested with some plausibility that a statement of Philochorus (quoted by the Scholiast to Arist. *Wasps*, 728, and Plutarch, *Pericles*, c. 37), according to which the total number of claimants to Athenian citizenship on the occasion of a distribution of corn among the citizens in 445 B.C. amounted to 19,000, should be interpreted as giving the generally accepted number of the Thetes at that date. The whole free male population of Attica of the age of 18 and upwards in 431 B.C. may thus be estimated at about 55,000 citizens, with an additional 10,000 or 15,000 for the metics. Some modern writers, however, estimate the number of Athenian citizens at the opening of the Peloponnesian War as 30,000 or 35,000. This number agrees with the loose statement now and then made that the number of citizens was 30,000 (*τρισημύριοι*); but it can hardly be reconciled with the passage of Thucydides referred to above, or with his further statement that Acharnae, which was only one, though considerably the largest, of the Attic demes, was able to supply 3000 hoplites. The number of citizens was no doubt greatly reduced by the plague in 430 B.C. and the following years: and throughout the Peloponnesian War there was a heavy drain of men, and also a loss of wealth, which must have diminished the numbers of the richer classes in comparison with the Thetes. It is therefore conceivable that in 411 the number of male citizens able to provide a hoplite's equipment at their own expense was no more than 9000, as seems to be implied in the speech of Lysias for Polystratus (§ 13); though it is possible that in this number the citizens serving with the army in Samos are not included. It is at any rate probable that by the end of the war the number of male citizens had sunk to between 20,000 and 30,000, and that it remained at some such figure throughout the fourth century B.C.

525. We have no statements as to the numbers of women and children;

Women and
children at
Athens.

these can only be estimated from the number of the adult males. Such evidence as is available appears to show that the men above the age of 18 probably formed about one-third of the population. At this rate the total free population of Attica (including metics) would have been about 200,000 at the beginning of the Peloponnesian War.

526. The census of Demetrius Phalereus referred to above is said to

Slave popu-
lation.

have shown a slave population in Attica of 400,000. This figure must be considered in connexion with a further statement made in the same passage of Athenaeus to the effect that Aegina at one time possessed 470,000 and Corinth 460,000 slaves. That Aegina, a barren island which was never of importance after the first

half of the fifth century B.C., should ever have contained 470,000 slaves, is quite impossible: the number given for Corinth is hardly less so: and both statements are now generally rejected. The statement as to Attica is less incredible: but doubt is thrown on it by its context, and economic considerations are so strongly against it as to make it probable either that the passage is corrupt, or that the number is a mere conjecture. It is not likely that the number of slaves in Attica can ever have exceeded 200,000, and the estimates given by most modern writers for the number of slaves in the fifth century are considerably smaller than this.

527. The evidence as to the population of Sparta is more scanty, and the various notices are again difficult to reconcile with one another. It is doubtful too whether statements as to the number of Spartan citizens refer only to the ὄμιοι (the fully privileged citizens) or include also the ὑπομεινέες (the disfranchised citizens), but it is probable that in most cases the ὄμιοι only are intended. According to the tradition which was usually accepted in later classical times, but which perhaps dates no further back than to the reforms of Agis in the middle of the third century, the Laconian territory was divided in early days into 9000 lots, one for each Spartan citizen, and 30,000 lots, one for each of the Perioeci. The number assigned to the Spartan citizens by this tradition agrees sufficiently with the statement of Herodotus that there were 8000 Spartan citizens at the time of the Persian War. But if these accounts are correct, there must have been a rapid decrease in the number of citizens during the fifth and fourth centuries. Xenophon states that at the battle of Leuctra 700 Spartiates were present, and it appears from his account that two-thirds of the Spartan army took part in this battle. It would seem therefore that at this date the number of citizens (probably of the ὄμιοι only) was about 1,500. Aristotle gives the number of Spartiates as less than 1000, and at the date of the reforms of Cleomenes it was reduced to 700. As to the number of the various subject-classes of Lacedaemonia we have no means of forming an estimate: but it seems clear that the Perioeci considerably outnumbered the Spartans, and that the numbers of the Helots were larger still.

528. A rough calculation as to the population of some of the other leading Greek States may be derived from the notices given as to the forces which they could put into the field. At the end of the fifth century B.C. Argos appears to have possessed about 20,000 citizens, Thebes about 20,000, Corinth about 12,000. It has been estimated that the total population of the Greek mainland, including Macedonia, at the end of the fifth century may have amounted to 3,000,000, 2,000,000 of these being free and 1,000,000 slaves or serfs: but these figures of course rest very largely on conjecture. Many Hellenic States outside Greece proper were of considerable size: Syracuse was in the fifth century the equal of Athens, and in the fourth the largest of all Greek States. It is, however, useless to attempt any estimate of the population

Sparta.

Other Greek States.

of the colonies, as we have no means of learning what proportion the Greek population bore to the barbarian or semi-barbarian population in each case.

529. It is possible with somewhat more confidence to give a sketch of the general movement of population in Greece. That there was a rapid increase during the eighth and seventh centuries B.C. is shown by the number of colonies founded during this period, and in particular by the remarkably rapid growth of the cities of Magna Graecia. During the sixth and fifth centuries the colonizing movement became less active, largely no doubt because the best land available had already been occupied: but colonists were still forthcoming in large numbers whenever there was an attempt to found a new settlement. In the fourth century Plato and Aristotle felt it necessary to discuss remedies for the danger of overpopulation, and Isocrates advocated the conquest of Asia as an outlet for the expansion of the Greek race. The pressure felt was probably due not entirely to increase of population, but also in part to the replacement of free labour by slave labour, which was in progress all over Greece at this time. It is, however, clear that Greece was still in a position to send large quantities of mercenaries and settlers to the East during the reigns of Alexander and the early Diadochi. But soon afterwards the tendency towards a decrease in the free population, which had made itself felt in Attica in the fourth century, began to spread through the rest of Greece. Polybius (c. 150 B.C.) is the first writer to notice the decrease, which continued with increasing force: under the early Empire the cities of Greece, with a few exceptions such as Athens and Corinth, had sunk to the position of villages, and Plutarch, writing in the first century A.D., estimates that the whole country could hardly produce 3000 hoplites.

The first attempt at a critical treatment of the question as to the population of the ancient world was Hume's *Essay on the Populousness of Ancient Nations*. The figures for Greece have been examined more in detail by Clinton (*Fasti Hellenici*, vol. II.), Boeckh (*Staatshaushaltung der Athener*, Book I.), Wallon (*Histoire de l'Esclavage*, vol. I. pp. 221-83), and Büchschütz (*Besitz und Erwerb*, pp. 138-42). The most comprehensive treatment of the subject is contained in Beloch's *Bevölkerung der griechisch-römischen Welt*. The numbers of the population of Attica are discussed by Wilamowitz-Moellendorff, *Aristoteles und Athen*, II. 9, and Meyer, *Forschungen zur alten Geschichte*, vol. II. pp. 149-89. A mention of the most recent estimates is to be found in Zimmern, *The Greek Commonwealth*, pp. 169-73, 393.

VI. 5. SLAVES AND SLAVERY.

530. SLAVERY is found in Greece under two different forms. (1) In certain districts there existed from early times a system of praedial slavery or serfdom, somewhat similar to that which prevailed in mediaeval Europe. Such serfs were members of a more or less organised subject community, were attached to the soil, and were recognised by the State as possessing certain rights against their masters. (2) The other form, which eventually became prevalent over the whole of Greece, was slavery of the Roman or modern type. The slave was regarded merely as a piece of property to be disposed of at pleasure, and stood in no relation to the State except through his owner. The word *δοῦλοι* is applied to both of these classes, but belongs more strictly to the latter: no generic word was used to describe the serfs, who were known by different names in different parts of Greece.

Forms of slavery.

531. Personal slavery existed to some extent in the society known to us through the Homeric poems. Slaves (called *δμῶες*, *οικῆες*, or more rarely *δοῦλοι*) are found in the houses of nobles, who obtained them by war or piracy or by purchase from Phoenician slave-traders. But slavery was not at this time general, and even in princely families much of the household work was done by the sons and daughters of the house. The master had no doubt absolute power over his slaves: still the relationship between master and slave as described by Homer is in many cases close and friendly. No trace of serfdom is found in the Homeric poems: for the *θήτες* who are mentioned as the lowest class of society were free labourers working for hire.

Slavery in Homeric times.

532. At the beginning of historic times serfs are found existing in different parts of Greece, but so far as we know only in those States which are recorded to have been invaded and conquered by Dorians or other immigrants from northern Greece.

Origin of serfdom.

It was generally believed by the Greeks, and is probably true, that the institution of serfdom was due to the Dorian migration and kindred movements, and that these subject-classes represented the descendants of the original population of the districts in which they were found. The most important of these serfs are the Helots (*Ἐλωτες*), who formed the subject-population of Laconia and Messenia.

Helots.

They were a Greek-speaking people, and are said to have been descended

partly from the pre-Dorian population of Laconia and partly from the inhabitants of Messenia, who were successively conquered and enslaved by the Spartans: we have no definite information as to their numbers, but they certainly far outnumbered their Spartan masters. They were attached to the landed estates (*κλήροι*) of the Spartans, and were bound to pay to the proprietors a yearly rent, which was fixed in early times at a definite proportion of the total produce, and might not be increased. The proprietor might not deal with his serfs in any way which involved their separation from the estate, he might not either sell them or set them free or put them to death. He had, however, a certain claim, not clearly defined, on their personal services, which was probably not usually burdensome, as the Spartans resided not on their estates but in the capital. Subject to these conditions the Helots retained their property and family rights: they kept for themselves what was left of the produce of the estate, and must in some cases have been comparatively well-to-do: in the time of Cleomenes 6000 were able to purchase their freedom at the price of five minas (£20) apiece.

The Helot thus possessed considerable freedom as against his master, but as regards the State his slavery was absolute. It was a custom for the Ephors on entering office each year to declare war against the Helots, thus expressing the fact that the State was bound by no obligation towards them: they might be put to death without form of trial: and a special corps of Spartan youths (*κρυπτεία*) was employed to keep watch on them and make away with any who appeared dangerous. The State could also override the rights of the individual Spartan proprietor, by emancipating the Helots attached to his *κλήρος* or withdrawing them for service in the army. It was the practice from early times to employ Helots as light-armed troops, and on the formation of a navy they were employed as rowers and marines: sometimes, though not often, they served as hoplites. Helots who had distinguished themselves in war were occasionally given their freedom: such emancipated Helots were called *νεοδαμῶδεις*, and received the status of *περίοικοι*. The *μόθακες* or *μόθωνες*, children of Helot or half-Helot birth, who had been brought up with Spartan children, formed another semi-privileged class: they could, at any rate under certain circumstances, rise to high office. Gylippus and Lysander both came from this class. By this policy of either putting to death or promoting possible leaders of revolt, the Spartans were able to maintain their rule, in spite of their small numbers and the hatred with which they were regarded; and they had only once to deal with a serious Helot revolt that was not encouraged by foreign invasion.

533. Of the serfs existing in other parts of Greece much less is known,

Other classes
of serfs.

but such information as we have seems to show that their position was similar to that of the Helots. The Thessalian serfs were called *πενέσται*: they cultivated the estates of the

Thessalian nobles, paying a fixed rent: their masters were forbidden to

put them to death or sell them out of the country. In Crete again there was a Dorian aristocracy ruling over non-Dorian subjects, who were divided into *μνωῖται*, serfs belonging to the State, and *ἀφαιμιῶται* or *κλαρωῖται*, serfs attached to the estates of private individuals. Other subject-classes existed in early times in other Dorian States under such names as *γυμνήσιοι* at Argos and *κορυννηφόροι* or *κατωνακοφόροι* at Sicyon. Nothing is recorded of these but the names, and it is probable that in many States serfs ceased to exist as a distinct class at a comparatively early date. In Laconia serfdom continued until the third century B.C., when its abolition was begun by Cleomenes (240—220 B.C.) who enabled many of the Helots to buy their freedom, and was completed by Nabis (tyrant of Sparta, 207—192 B.C.).

534. Slavery in the stricter sense of the word existed to some extent, as has been said, in the Homeric period, but it did not become generally prevalent in Greece till much later. In historic times it is first mentioned in Ionia: Chios is named as the earliest centre of the slave-trade, and is said in the fifth century to have possessed more slaves than any other Greek State except Sparta. A law against keeping slaves is said to have been passed by Periander (tyrant of Corinth about 600 B.C.), and it would appear therefore that slavery was at this date practised to some extent on the Greek mainland, but was hardly a recognised institution even in the most advanced States. By the middle of the fifth century slaves were no doubt common in the most important cities, but even in these many forms of industry were still carried on by free men. Thucydides describes the Peloponnesians at the opening of the Peloponnesian war as *αἰτουργοί*: the expression can hardly be meant to apply to commercial towns like Corinth, but must mean that foreign slaves were not employed in the rural districts. Even in the middle of the fourth century slavery was not general in Boeotia, and was almost unknown in Phocis and Locris: but by the beginning of the third century it was probably prevalent all over Greece.

Growth of personal slavery.

535. Slaves were occasionally of Greek, but more often of foreign race. It was a rule of Greek international law that prisoners taken in war became the property of the conquerors, but in the fifth and fourth centuries B.C. it was the almost universal practice to exchange prisoners of Greek race or to allow them to be ransomed: the treatment of the Athenian prisoners by the Syracusans is one of the rare exceptions. Instances are rather more common in which a captured city was destroyed and the whole of the inhabitants sold into slavery: this was allowed by Greek sentiment as a punishment for the revolt of a subject-city: it was occasionally practised in other cases (as at Plataea, Melos, Olynthus), but was then strongly condemned. Athenian law did not, at least from the time of Solon, allow enslavement for debt, nor the sale of children by their parents: in some other parts of Greece both were possible. The child of a free man by a slave woman took the position of a slave in

Enslavement of Greeks.

Athens. Children exposed at birth became the property of anyone who cared to bring them up: and cases of kidnapping occasionally happened. It is not known how far the freedom of a Greek citizen was protected by States other than his own: but such an incident as the selling of Plato into slavery by the tyrant Dionysius was certainly exceptional. The proportion of Greek to barbarian slaves was small, and probably tended to diminish.

536. Barbarian slaves were drawn in the main either from Western Asia (Lydians, Phrygians, Syrians, etc.) or from the tribes round the Black Sea, who were known by the generic name of Scythians. Aristotle defends the enslavement of both

classes as natural, on the ground that the Orientals possessed intelligence without courage and the Northerners courage without intelligence. Barbarian slaves were obtained by means of a regularly organized slave-trade, of which Byzantium and Delos are named as centres. Slaves were occasionally home-bred (*οικότροιβες*): but on the whole it was found more economical to buy them at maturity. The great majority of the slaves must have been adult males: those employed in the mines, agriculture, and other industries were naturally in most cases men, and men seem to have been more used than women even for domestic service. (For an estimate as to the total number of the slave population of Attica see § 526.)

537. Aristotle speaks of the slave as being merely a machine (*ἔμψυχον ὄργανον, κτήμά τι ἔμψυχον*): and this was on the whole the view taken by Greek law and public opinion. A slave could be bought and sold at pleasure, could be given in pledge or taken in dstraint, just like any other commodity. His family relations were not recognised by the law: he could not own property, and any money that he might earn belonged not to him but to his master. But as regards his personal position, Greek law, or at least Attic law, did not carry out its theory with the same severity as did the law of Rome. A freeman who assaulted a slave was liable, not only to an action for damages (*δίκη βλάβης*) on the part of the owner for injury to his property, but also to a criminal prosecution (*γραφὴ ὑβρεως*). A freeman who killed a slave was punishable for manslaughter, though not for murder. Even the owner's rights over his slave's person were limited by Athenian law: the slave might not be put to death, and in the case of gross ill-usage he might take sanctuary and demand to be sold to another master (*πρᾶσιν αἰτεῖν*). Slaves could not appear as parties in the law-courts, and at Athens their evidence was not as a rule admitted except under torture: in the fifth century the practice of torturing slaves seems to have been a reality, but in the fourth century, though frequently proposed in the law-courts, torture seems rarely to have been employed. Slaves could be manumitted, and in such an event the slave often paid a certain sum to the master as price of his liberty: he could not, however, claim the right to buy his freedom, as indeed the purchase money was in the eye of the law his master's property.

Barbarian
slaves.

Legal posi-
tion of slaves.

Since the slave could not enter into a contract recognised by law, manumission often took the form of a fictitious sale by the owner to some god: registers of these sales were preserved in the temples, and many specimens have been found at Delphi and elsewhere. At Athens manumitted slaves (*ἀπελεύθεροι*) received the privileges of *μέτοικοι*, but remained under the obligation to regard their former master as their patron (*προστάτης*), and to perform certain duties towards him: in case of neglect of these they were liable to a *δίκη ἀποστασίου*, and might, if convicted, be again sold into slavery.

538. The average price of an able-bodied unskilled slave such as would be employed for work in the mines was about 2 to $1\frac{1}{2}$ minas (£8 to £6). Slaves possessed of special skill or personal qualities might of course fetch much higher prices: the highest recorded is a talent (£240), which Nicias is said to have paid for a mining overseer. Demosthenes' father owned 32 swordsmiths, who cost in all 190 minas (£760, or on the average £24 each), and 20 couch-makers, who cost in all 40 minas (£160, or an average of £8 each).

539. As to the conditions under which slaves were employed, our knowledge is almost confined to Attica. Slaves were employed by the Athenian State for several purposes. A force of Scythian archers (*Σκύθαι* or *τοξόται*) was maintained to keep order in the Assembly and public places: and slaves were also used for the subordinate work of the government offices. A writer of the fourth century proposed that the State should purchase slaves to work the silver mines at Laureium, but this plan was never carried out. The Athenian warships were rowed to some extent by slaves, who were not the property of the State but were supplied by the trierarchs: but free men were preferred for this service. Slaves who had served with the fleet were sometimes emancipated, or even enfranchised, as after the battle of Arginusae. A proposal was made to arm the slaves after Chaeronea, but it was rejected, and Hypereides its mover was impeached for making it.

540. Slaves were employed by private owners (1) as domestic servants and (2) as workers for profit. It is not clear how far down in the social scale the employment of slaves for domestic purposes extended, but it was probably confined to the richer classes. At any rate it was not the practice at Athens, as it was at Rome, for a single individual to own a large number of slaves for purposes of luxury. Even in well-to-do households only about five or six slaves were usually employed. It would seem that in Attica in the fifth century the small farmer was not a slave-owner, and that agriculture was mainly carried on by free labour. Slaves were, however, employed at this period in various industries. Inscriptions dealing with the payments made by the State for the building of the Erechtheum in 407 B.C. show that slaves worked as masons side by side with free labourers and received the same

Price of slaves.

Employment by the State.

Employment by private owners.

wage. Again the names of several of the Attic vase-painters indicate that they were or had been slaves. In such cases as these the slave probably worked directly under the control of some small master-craftsman by whom he was owned. Another practice was for the owner to set up the slave as an independent worker in some business on condition of receiving regularly a stipulated payment (*ἀποφορά*) out of his profits. Slaves working on these terms were described as *χωρὶς οἰκοῦντες*. It was not uncommon for an owner to promise a slave his freedom at the end of a definite period in order to stimulate his energies. Slaves who were employed in business could sometimes attain to considerable wealth and importance; thus Pasion, who is referred to in several orations of Demosthenes, rose from being a slave to be an Athenian citizen and the leading banker in Athens, and on his death bequeathed his business to a former slave of his own. Cases such as this represent one end of the scale; at the opposite end we find the slaves who were employed in the silver mines at Laureium. The work here was carried on exclusively by slaves, owned by capitalists who had leased concessions in the mines from the State. The slaves were chained and worked underground in gangs under slave overseers; the labour was exhausting and incessant, and the death rate was high. It would seem that this was the earliest industry in which slave labour was employed on a large scale; we are told that Nicias, one of the richest Athenians of his day, had 1000 slaves engaged in these mines.

541. Slavery, as it existed at Athens in the fifth century, differed in some important respects from slavery as it existed later in the Greco-Roman world. In the first place, Athenian society in the fifth century was still in the main a society of free workers, though slaves had begun to form a considerable element in the population. The view sometimes held that Greek civilization was fundamentally based on slavery does not correctly represent the facts as regards this period. Secondly, as a natural consequence of a state of things in which slaves and free men worked together at the same employments, the distinction between the slave and the free man, though sharply drawn by the law, was less marked in ordinary intercourse than it became in later times. It is noted by several writers as a feature of Athenian life that the slaves shared to some extent in the general liberty. They were not compelled to wear a special dress, and in appearance and manner they were often indistinguishable from the citizens. Access to the gymnasium and ecclesia was forbidden to them; but they were allowed to enter the temples and to take part in public and private religious rites. The Attic drama shows how intimate and human the relation between slave and master could sometimes be. The familiarity allowed the slave in Latin comedy represents the manners of the Athens of Menander rather than those of Rome; Plautus indeed mentions it as a peculiar feature in Greek society that the slaves were permitted a certain amount of

Development
of slavery.

enjoyment and recreation. But in course of time the position changed as regards both the points mentioned above. The proportion borne by the servile to the free population increased, and during the fourth and following centuries industry and manual labour came to be carried on more and more entirely by slaves. Along with this development came a widening of the gulf between the slave and the free man, and a deterioration in the conditions of life to which slaves were subject. In the second and first centuries B.C. Attica and Greece in general became, like other parts of the Roman Empire, the scene of slave revolts and servile wars, which were unknown in earlier times.

542. Slaves were named at their master's pleasure. It is said that names of certain heroes and names with religious associations might not be used for slaves, but this rule does not seem to have been very strictly observed. Apart from this there seems to have been nothing to prevent slaves from bearing the same names as free men, though they usually received one of certain stock-names which came to imply a servile position. Among those commonly used were names expressing or implying the race of the slave, as Geta or Manes: names descriptive of personal appearance, as Xanthias or Pyrrhias: and names expressing some quality which the slave possessed, or which was thought desirable in a slave, as Dromon, Sosias. The name was often changed on manumission.

Names of
slaves.

Wallon, *Histoire de l'Esclavage dans l'Antiquité*; Boeckh, *Staatshaus-
haltung der Athener* (3rd ed.), Book I. c. 13; Hermann-Thumser, *Staatsalterthümer*, § 114; Büchenschütz, *Besitz und Erwerb*,
pp. 104-208; Zimmern, *Greek Commonwealth*, Part III. c. vii, xv, xvi.

Bibliography.

VI. 6. COLONIES.

543. THE first beginnings of Greek colonisation may fairly be traced to the migrations, through which the political geography of Greece itself was materially changed, and a primary expansion of Greek settlers over the Aegean islands and the west coast of Asia Minor was set in motion. Slowly, but surely—history has not recorded the stages—the civilization of Crete and of Mycenae was undermined, and Greek cities of Aeolian, Ionian, and Dorian origin superseded the settlements of Phoenicians, Leleges, and

Hellenic
expansion.

Carians. This expansion was followed, throughout the Greek world, by a period of internal development, political and economic; until there ensued, by a natural reaction, a second age of expansion, which lasted from the middle of the eighth to the middle of the sixth century, and resulted in the foundation of some 250 colonies (*ἀποικίαι*), supplying an almost continuous circuit of Hellenic influence round the Mediterranean and the Euxine. The geographical distribution of these cities may be seen by a reference to § 27. Viewed chronologically, they fall into two main divisions: (1) those of the period 750—700, and (2) those of the period 650—550. To the former belong Corcyra, Sinope and Trapezus, and the chief colonies in Italy and Sicily, and in Chalcidice: to the latter the colonies of colonies, and such important foundations as Massilia and Agrigentum, Cyrene, Chalcedon and Byzantium, Olbia and Panticapaeum. In the first period the Ionian Chalcis and Miletus (herself the mother of 75 cities) were the leading colonists: in the second Miletus, Megara, Corinth and Phocaea, and among the later colonies themselves Syracuse and Massilia—all trading or manufacturing cities, be it noted.

544. The colonies of the second epoch were the results partly of necessity, partly of enterprise. Sometimes colonisation became necessary for political or economic considerations, as a relief from foreign or domestic tyranny, from deadlock between parties, from over-population, debt and slavery. More often, the enterprise of a person (Cypselus of Corinth) or of a State (Miletus) discerned in colonisation a means of commercial gain. The Italian and Sicilian colonies, many of which owed their origin to political causes, became agricultural and pastoral communities for the most part, though some gained an added importance from their situation (*e.g.* Sybaris) upon regular trade-routes between East and West: the colonies of the Propontis and the Euxine were distinctly commercial from the first.

545. In cases of enforced emigration the colonists were members or subjects of the same State (*e.g.* the Parthenii at Tarentum): whereas colonies of enterprise were often heterogeneous, including invited contingents from friendly States, and chance adventurers. In the original 'colonies' Ionians had sometimes combined with Dorians, and in the later foundations also, though nominally Dorian or Achæan, the Ionians often had a considerable share. It was usual to commit the whole expedition to the care of a 'founder' (*οἰκιστής*), entrusted with plenary powers and assisted generally by seers and surveyors (*γεωνόμοι*): his duty it was to lead the way to the selected region, to direct the apportionment of lands, and to frame the constitution of the colony. In most cases he would secure the authorisation of the Delphic Oracle; and without unduly magnifying its influence in this connexion, it is quite clear that the Oracle was sagacious enough to utilise the political and geographical resources of its intelligence department in the best

interests of a larger Hellenism, and its colonial policy justly redounded to its credit. The Oracle, in fact, confirmed rather than initiated; for the formal foundation of cities could only have followed the tentative efforts of explorers, whose successful traffic or piracy among unknown tribes encouraged more peaceful visits and more permanent settlements.

546. The relations of a Greek colony with its mother-city deserve attention, for though somewhat indeterminate, they could exercise no mean influence upon history, as a few prominent examples (*e.g.* Corcyra and Corinth) showed. Politically the colony was independent (Potidaea, with its Corinthian *ἐπιδημιουργοί*, is an exception), but the sentiment of filial loyalty was everywhere manifest. It appeared in a desire to reproduce the conditions of life in the metropolis (from whose *πρυτανεῖον* it was customary to carry fire to the colony); in the mission of representatives and victims to great home festivals, and in special honours shown to the representatives of the mother-city at colonial celebrations; in the request for an oecist from home when a colony wished to found a colony of its own; in a reference to the mother-city at seasons of distress, and in a general avoidance of war and misunderstanding with her. Sometimes a closer commercial connexion may be seen, as in the coinage of the Corinthian colonies, where one type was preserved, with the addition of an initial letter to mark each city; or in the Greek trading companies at Naucratis, which were in direct communication with their several parent-states; and to a less formal degree in the Milesian colonies, which served as trading agencies round the Euxine.

Character-
istics of the
colony.

In some cases the Greek settlements (*e.g.* on the Etruscan coast, where considerable opposition was encountered) were never able to develop beyond the factory-stage; but as a general rule the conditions of a city-state were faithfully reproduced, for the Greek colonist, with all his love of travel, loved his home also. So in Sicily, in Italy, and along the Euxine sea-board, the settlers occupied first the spots most similar to the home-country—a country of bays and harbours, of citadel-hills, and clear natural boundaries. And as in topography, so in politics; colonies of co-citizens tended to become oligarchical, the original settlers forming the body politic, while communities of merchant-adventurers were often timocratic after their kind. As a general rule, political development in the colonies was more rapid than at home; thus the codes drawn up by Zaleucus of Locri and by Charondas of Catana anticipated those of Greece proper. In religion the imitative tendency was again apparent; but the worship of local deities (*e.g.* of Ammon in Cyrene) was frequently incorporated, and divine honours were paid after death to the oecist—or, if his name had been forgotten, to some god or hero (usually Apollo Archegetes or Heracles) chosen as official founder of the colony.

547. The colonial life had its shortcomings: successful trade led to money-worship, and an acuter antagonism between rich and poor, while luxury wrought frequent disintegration. Nevertheless, a distinctly Greek nationality was everywhere maintained, and confirmed from time to time by participation in the great national festivals, or by a renewal of filial obligations. Even in Egypt, where the sphere of their influence was limited by the government, the Greek settlers left a lasting impression: and elsewhere each colony taught the 'barbarians' around the lessons of a higher humanity, in private and in public life, learning meanwhile those arts of accommodation to which the Ionian temperament so readily lent itself. Where it rested upon trade, the intercourse was usually of a peaceful nature: but the determined opposition of Carthage in the West obliged the Greeks to show that they could fight as successfully as they traded. From their constant contact with 'barbarians' the colonists were brought to a fuller appreciation of their Greek heritage, religious, social, and political, finding in it a means of mutual understanding; and in the Amphictyonic associations, whether of Ionians (Πασιώνιον) or Dorians (Τριόπιον) in Asia Minor, of Italiots at Croton, or of Siceliots at Naxos, we may perhaps foresee the elements of an international law which posterity was to develop.

The history of Greece and of Europe has repeatedly brought the colonies into prominence: Syracuse, Olynthus, Byzantium have determined the fate of nations. In literature, too, 'Greater Greece' deserved well; but it was in philosophy that the colonial intellect found fullest expression. After Pythagoras took up his abode at Croton Italy became the mother of philosophers—Parmenides, Xenophanes, Zeno, Empedocles; Abdera claimed Democritus and Protagoras, Sinope Diogenes, and Stageira Aristotle. It is no exaggeration to say that the Greek colonies have been in large measure responsible for the continuity of western civilization, for the Greek model of city-life, perpetuated by such examples as Neapolis, Byzantium, and Massilia, became the foundation of much that is best in the civic systems of to-day. The colonies have been treated as the secondary expansion of Hellenism: after the lapse of two centuries it fell to the lot of Alexander the Great to inaugurate a third era of expansion, in an eastward direction, and by land. Whether his half-military foundations were conscious copies of the earlier colonies or not, the fact remains that he clearly comprehended the importance of establishing Greek centres throughout his vast and various dominions: what history owes to him and to his successors Alexandria, Antioch and Seleucia bear witness.

548. Though traditionally regarded as the metropolis of the Ionian cities, Athens took no prominent part in the larger colonising movements, preferring to concentrate her resources at home: but under Pericles a few State colonies were sent out (*e.g.* to Brea

Effects.

Cleruchies.

and Amphipolis in Thrace, and to Thurii), generally with the double object of decreasing the city populace and of securing some point of vantage in 'barbarian' territory. More often, however, the Athenians relieved domestic distress, controlled their allies, and secured their conquests, by means of κληρουχία. A party of citizens, chosen by lot from all who offered, was conducted by a State official to a selected spot in Greek, not 'barbarian,' territory, and was there forcibly or peaceably established upon allotted portions after the ejection (Scyros, Hestiaea) or subjection (Naxos, Andros) of the previous inhabitants. The allotments were not regarded as private property, for the State reserved the freehold. As *propugnacula imperii* these State-organised settlements practically corresponded to Roman colonies. The first instance occurs at Salamis about 570 B.C., a second in 506 at Chalcis, where 4000 lots (κλήροι) were apportioned; subsequently the same policy was adopted in Scyros, Lemnos, Imbros, Lesbos, Chalcidice and elsewhere. No citizen was compelled to become a cleruch, but every cleruch became, if he was not already, an Athenian citizen, and the advantages offered attracted numerous candidates from the poorer classes. The cleruchs retained their Athenian citizenship; their votes might lapse by absence, but their names remained on the registers of tribe and deme, and they were still liable for military service. Constitutionally, the cleruchies were miniatures of Athens, with local jurisdiction and finances; but all important cases were referred to the Athenian courts, and (in the fourth century) the accounts were audited by Athenian ἐπιμεληταί. Part of the allotted territory was reserved for the gods, part sometimes for the State also. This profitable system of occupation was naturally popular with the Athenian democracy, but often oppressive for the subject States: indeed, its abuses contributed to the downfall of the Athenian Empire in the Peloponnesian War, so that we are not surprised to find 'no cleruchies' insisted upon as one of the conditions of the Second Confederacy of 377 B.C.—a condition broken after the Athenian reduction of Samos in 366.

Article *Colonia* in Daremberg and Saglio's Dictionary; Busolt, *History of Greece*, chapter ii. §§ 6, 7; Holm, *History of Greece*, volume 1. chapter xxi.; Zimmern, *Greek Commonwealth*, part 111. Bibliography. chapter vi.

VI. 7. COMMERCE AND INDUSTRY.

549. THE heroes of Homer are represented as the lords of pastoral and agricultural communities, wherein the merchant (*ἔμπορος*) had no existence, and the craftsman (*δημιουργός*) comparatively little importance. Navigation was carried on with considerable skill, but chiefly for hostile purposes: still, in the *Odyssey*, we can trace the beginnings of more peaceful voyages. But as far back as 3000 B.C. the Cretans seem to have sailed and traded in the Mediterranean: much later—probably not before 1200 B.C.—came the Phoenicians, establishing their factories and settlements along its shores. There were other traders also, but not so enterprising or far-reaching, Taphians, Carians, Lemnians, Phaeacians, Thesprotians, and Sicels. The general method of traffic was probably barter. At first only a simple exchange was practicable, but gradually some sort of currency came to be arranged upon the basis of generally accepted units such as the ox, of which the local units—such as the package of silphium at Cyrene, and the tunny at Olbia and Cyzicus—could be conveniently reckoned as sub-multiples. The traders brought in their vessels, and set out on the beach the attractive products and manufactures of the East—ivory, purple stuffs, glass, metals, tools, weapons, jewellery; and took in exchange whatever they could get—sheep and oxen, wool and hides, and corn (afterwards oil and wine also). Slaves, too, were a staple commodity on both sides, and in many cases the early traders were kidnappers also, so that their visits were frequently regarded with suspicion.

550. But it was obvious that the Greeks, with their natural affinity for the sea, their geographical advantages, and their imitative propensities, could not long remain merely passive partners in these rough and ready transactions. The successive expansions of Dorians, Ionians, and Aeolians over the peninsula of Greece, the islands of the Archipelago, and the west coast of Asia Minor, began a new chapter in commercial history, in which the Greeks were to play the leading part. Slowly they ejected or subjected the previous occupiers, and made the Aegean their own; commerce abroad was sustained and solidified by the development of special industries at home. But the era of expansion was not at this stage complete: the Greek followed the Phoenician all over the Mediterranean, especially northward and westward. Greek colonies in the eighth and seventh centuries supplanted or supplemented Phoenician factories, until the whole sea-board was connected by a chain of some 250 trading-centres, by which the products of the civilised and uncivilised world were brought into circulation. In this commercial development Aegina, Corinth, the cities of Euboea, Delos, Miletus, and

Pioneers of
Mediterranean
commerce.

Greek
expansion.

Megara were conspicuous. In the sixth century B.C. the chief commercial centres were Miletus, Samos, Sinope, Byzantium, Phocaea, the cities of Rhodes, Ephesus, Aegina, Corinth, Athens, Chios and Corcyra: in the fifth century Athens was indisputably the leader, though the Ionian cities, with Corcyra, and Corinth, were still of first-rate importance. The result of the Peloponnesian War ruined at once the political and the commercial pre-eminence of Athens. Corinth still enjoyed a considerable prosperity, and Athens recovered somewhat during the fourth century; but the conquests of Alexander, while they widened the sphere of commerce, and brought East and West into closer relationship, diverted Greek trade to fresh centres, Alexandria, Antioch, Seleucia, and Rhodes, large towns of the modern type which held their own up to and during the Roman supremacy.

551. The chief commodities which formed the basis of the Greek export-trade were the oil of Attica; the wine of Chios, Naxos, Lesbos, and Thasos; the agricultural produce of Trade-routes and centres. Megara and Boeotia; the purple of Cythera and other coast-places; the copper of Euboea and Cyprus; the silver of Laureium; the gold of Thasos; the iron of Laconia; and the tunny of Byzantium. The chief manufactures for export were the woollens, purples, and carpets of Miletus, Chios, and Samos; the metal-work of Corinth, Chalcis, and Argos; the trinkets of Aegina; the pottery of Chalcis, Corinth, and Athens. The principal import was corn, obtained from the Black Sea, Magna Graecia, Sicily, and Egypt: other articles shipped in large quantities were salt, salt fish, wool, timber and skins.

552. The positions of the Greek colonies enable us to determine with fair accuracy the direction of the principal trade-routes, Sea-routes. since the ships of the Greeks (who were not more adventurous sailors than now) commonly followed the coast-lines. The most important route led northwards from Aegina, Corinth, and Athens, by way of Euboea, Pagasae, Chalcidice, Thasos, Samothrace, Imbros, Lemnos, Tenedos, Lampsacus, Cyzicus and Byzantium, to the Black Sea. Here the leading traders were Miletus and her sister-cities, with Megara, Athens, and, later, Rhodes. Another important route crossed the Aegean N.E. by Euboea, Chios (the great slave-mart) and Lesbos, and so reached Clazomenae and Phocaea; another, bearing eastward by the Cyclades to Miletus and Ephesus, was associated with branch lines connecting Athens and the Peloponnese with Crete, Rhodes, Cyprus, Phoenicia, and Egypt. To the west the most important route circumnavigated the Peloponnese to Leucas and Corcyra, and thence struck across to Italy, Sicily, and beyond. (For the speed of merchant vessels see § 625.) The connecting agents between so many different ports must have derived no little advantage from the carrying trade alone, as we may gather from the importance to which Phocaea and

Sybaris attained. And the natural result of this inter-connexion appears also in the establishment of sound systems of coinage, weights and measures, in the improvement of ship-building (especially at Corinth and Phocæa), and the use of rowing as a surer method of transport than sailing, and generally in the growth of a certain consciousness of trade responsibilities.

553. On land, there was a network of roads intersecting the Greek peninsula; these, though perhaps intended primarily for religious ends, could be used for trade. Thus Sparta was connected with the coast east and south, and with the adjacent States west and north; Argos with its own coast, Mantinea, Orchomenus, Sicyon, and Corinth; and all the roads in the Peloponnese found a focus at Olympia. A highway ran from Corinth past Megara to Plataea and Thebes; and the latter was in its turn connected with the coast and with Delphi, Thessaly, and the north. Commercial intercourse between the Adriatic and the Euxine was maintained by land from the earliest times: and each of the chief Euxine cities represented the terminus of a land-route, Olbia from the north, Phasis from the east, and Sinope from the south, while in Ephesus the great caravan-lines from the east were concentrated.

554. The chief centres of the wool-trade were Asia Minor (Miletus), Attica, Megara, and Magna Graecia (Tarentum). The wool in its rough state (*ἔριον, πόκος, οἴσυπος*) was first washed (*πλύνω*), then beaten (*ῥαβδίζω*), combed (*ἔλκω*), and carded (*ξαίνω*), after which it was ready for the dyer (*βαφεύς*). The next process was that of spinning (*νέω, κλώθω*), by which the natural thread was drawn off the bundle (*τολίπη*) on the distaff (*ἡλακάτη*), twisted in the fingers into a continuous thread (*νήμα, στήμων*), either coarse (*πυκνός*) or fine (*ισχνός, ἀραιός*), and attached to the spindle (*ἄτρακτος, ὄνος*). Unevennesses were taken off with the teeth (*κροκνδίζω*); and the wool-bound spindle (*κλωστήρ*) was put into a basket (*κάλαθος, τάλαρος*). The question of weaving (*ὑφαίνω*) is complicated by difficulties,

due to a confusion of two looms (upright and horizontal) and a different use of terms by different authors. The earlier Greeks employed the upright loom (*ἰστός*), with its two side-poles (*ἰστόποδες, κελόντες*) and cross-piece: subsequently the horizontal loom, of similar design, was introduced, probably from Egypt. In using the upright loom the threads of the warp (*στήμων*) were laid on and fastened (*διάζομαι, ἄττομαι*) to the cross-piece, being kept vertically parallel (*μηρῶμαι*) by heddles or loops (*μίτοι*) half-way, and by other loops (*καῖροι*), and weights (*ἄγνυθες, λαῖαι*) of stone or clay, at the bottom. The heddles were fastened alternately to two cross-rods (*κανόνες*), and the method of weaving consisted of drawing forward each set in turn, thus leaving a passage for the horizontal cast of the shuttle (*κερκίς*), which carried the

thread of the woof (κρόκη) wound into a bobbin (πηνίον). The Greeks wove downwards, and used a spattle (σπάθη) to pack (κρούω, σπαθαύω) the woof upon the warp, and a comb (κτείς) to smoothe the texture and the surface before cutting out (ἐκτέμνω) the piece of work. The details of the horizontal loom are quite uncertain: in the hand-loom of later times pedals have been used to effect the raising of the alternate threads of the warp, and it is reasonable to suppose that the Greeks had some similar contrivance.

The products of Greek looms (ὑφασμα) eventually became celebrated for technical and artistic excellence, exhibiting every variety of colour and pattern (e.g. ραβδωτός, 'striped,' πολύμιτος, 'damask'), into which gold and silk threads were not infrequently woven (χρυσόπαστος). Spinning and weaving continued as in early times to be the special employment of female slaves (χερνητίς) in large households: but the better methods of wholesale manufacture, and the special skill required for such operations as dyeing and cleaning, soon invested the woollen industries with a technical character. As was natural, some of the manufactories confined themselves to one branch of work; for instance, one at Athens supplied χλάμνδες only, another at Megara ἐξωμίδες for workmen.

555. Wine and oil were important articles of export. The vine was probably a foreign introduction, and found a home in many of the islands, in Sicyon, Chalcidice, Asia Minor, and Magna Graecia. (For the cultivation of the vine and the manufacture of wine see §§ 686, 691.) The producers or wholesale merchants sold by sample (δείγμα) to retail dealers in the markets: for the purposes of carriage pitched skins (ἀσκοί) were used. The olive, which was probably indigenous in the Aegean area (there was an olive press in the Palace at Cnossus), early became associated with Attica: it was also cultivated at Cyrene, Cyprus, Massilia, Clazomenae, and Sinope. (For the manufacture of oil see § 686.)

(b) Wine and oil.

556. Greek mining owes its introduction to the Phoenicians, who probably copied Egyptian methods: these were often irrational, from an ignorance of geology. The exacting labour of the mines (μέταλλα) was carried out by gangs of slaves, by whom the ore (μεταλλεύιον) was extracted from the richest veins (φλέβες, ραβδοί): from the pit's mouth (στόμιον) galleries (ὑπόνομοι, σύργγες) were hewn out, pillars (ὄρμοι, μεσοκρινεῖς) being left for support. Hard by outside were furnaces (κάμινος, χόανος) and workshops (ἐργαστήρια), where the processes of crushing (τύπτω), washing (πλύνω), sifting (διασήθω) and smelting (ἔψω, ὀπτάω) were carried out, until the metal was freed of slag (κίβδος, σκωρία). Diodorus Siculus (III. 11 et seqq.) and Agatharchides (c. 24 et seqq.) have given vivid pictures of gold-mining in their own times; and the other metals seem to have been similarly worked. Besides

(c) Metallurgy.
(x) Mining.

the simple metals various alloys were commonly used: e.g. of gold (ἤλεκτρον, ἀδάμας); of silver (λιθάργυρος, κέγχρος, καδμεία); of copper (χαλκός); while from iron a kind of steel (χάλυψ, κύανος, ἀδάμας) was made by tempering the red-hot metal in water. Of the numerous metal-working

centres Corinth attained a special pre-eminence by excellent workmanship: the evidence of terminology shows us to what an extent this industry was elaborated and subdivided.

Gold was principally used for jewellery; silver for the vessels of the table; bronze or copper for larger vessels, or works of art; and iron for general purposes. The methods of working fall into three groups, according to the condition of the metal: (i) pliant, (ii) liquid, (iii) hard. (i) To this class belong the processes of plating, turning, and punching; the oldest and commonest practice was to hammer (ἐλαίνω, σφυρήλατος) plates (λεπίς, πέταλον) of metal into the required shape, sometimes by means of a block, and to join them together afterwards; or ornamentation in relief or the reverse was effected by the use of the punch. (ii) When casting was invented is doubtful: tradition ascribes it to Rhoeus and Theodorus of Samos (flor. 600—550 B.C.), and iron-soldering (σιδήρου κόλλησις) to Glaucus of Chios (fl. 490), though in this case similar methods had long been in vogue, as is proved by the golden relics of Mycenae. Sometimes moulds and models (πρόπλασμα, λίγδος) were formed of clay alone, sometimes of clay and wax spread over a wooden core (κάναβος) with an envelope of clay, the molten metal eventually replacing the wax. (iii) The art of cutting and graving metal (τορευτική) was elaborately developed, till it included many varieties of chasing and damascening, chiefly employed in the manufacture of weapons.

557. Under ceramic industries are included (1) bricks and tiles;

(2) pottery, plain or ornamented; (3) statues and models.

(d) Ceramic industries.

(1) Bricks (πλίνθοι) were more often sun-dried (ἄμαί) than baked (ὀπταί): tiles (κέραμοι) were made either flat or curved. (2) In the manufacture of earthenware (κέραμος, ὄστρακον) the clay was first kneaded and tempered (ἐλκω, ὀργάζω), next manipulated (ἐλαίνω) upon the wheel (τροχὸς κεραμικός), then dried or burnt (ὀπτάω); the soundness of the vessel was tested by knocking (κρούω), after which in most cases some form of ornamentation was added. (For methods of vase-painting see §§ 353 ff.) At first there was little specialisation among potters, but as time went on the development of taste and technique rendered this inevitable. Individuality appeared in various ways: in the nature of the clay; in the shape of the ware; in the treatment of the groundwork; in the subjects chosen for the ornamentation; in a preference for outline, silhouette, or relief; in the addition of new colours, locally procured or admired. (3) The works of art in which clay was used consisted of (i) statues large or small—the latter being the familiar terracotta figures manufactured in great numbers (especially at Tanagra)

for purposes of religion or ornament (see §§ 369 ff.)—or (ii) clay reliefs, designed with or without the aid of moulds, for the external decoration of public and private buildings. Moreover, artists in stone or metal commonly used clay models or designs: and the manufacture of clay dolls (*κόραι*) for children became a special branch of the potter's trade (*κοροπλάθοι*).

558. The interchange of ideas and commodities which resulted from the increase of commerce raised the standard of comfort, and complicated the city life—a development which may be illustrated by a classification of the numerous arts, crafts, and trades of which there is evidence. (a) The house itself implied quarrymen, brick and cement makers, stonemasons, builders, bricklayers, foresters, sawyers, carpenters and joiners, with a supervising *ἀρχιτέκτων*; the manufacture of furniture and utensils occupied a host of workers in stone, clay, metal, wood, wool, glass, and other substances, with a terminology so complete that almost every article gave its name to a particular craft (*e.g.* *κλινοποιοί, καδοποιοί, ληκθοποιοί*). (b) The supply of food, drink, and household necessaries occupied flour-merchants, millers, bakers, bread-sellers, confectioners, butchers, fishmongers, poulterers, greengrocers, fruiterers, vintners, salt-boilers, spice-sellers, cooks, torch-makers, oil-merchants. (c) Articles of apparel engaged spinners, weavers, dyers, tailors, fullers, cleaners, gloves, hosiers, hatters, tanners, leather-sellers, shoemakers. (d) The manufacture of arms was a distinct industry, with special craftsmen after their kind (*e.g.* *κρανοποιοί, ἀσπιδοποιοί*). (e) Under the head of conveyance may be included shipwrights, oar-, sail-, rope- and tackle-makers; horse-dealers and saddlers; cartwrights and wheelwrights. (f) Personal luxuries were attended to by barbers, perfumers, and unguent-sellers; stick-, umbrella-, and camp-stool-makers; goldsmiths, silversmiths, jewellers; workers in horn, bone, ivory, tortoise-shell, amber; paper and pen makers, booksellers: for entertainments and amusements there were flower and garland sellers, flute and lute players, jugglers and acrobats, trainers of game-cocks and quails, trained cooks, furniture-brokers, doll-makers, musical-instrument-makers.

559. Wholesale trade was developed comparatively late among the Greeks, but the progress of commerce and the verdict of society rapidly differentiated it from the retail business conducted by producers (*αὐτοπῶλαι*) and petty tradesmen (*κάπηλοι*), just as wholesale manufactories (*ἐργαστήρια*) were distinguished from the workshops of single craftsmen. Wholesale traders (*ἐμποροί*) frequently did not confine themselves to one commodity, but shipped various cargoes for colonial ports; they would often accompany their goods in person (*οἱ πλέοντες, συμπλέοντες*), unless they had some authorised traveller, or agent abroad. At most large ports a spacious hall (*δείγμα*) was provided at public expense for the purpose of displaying samples

Lesser industries.

Trade.
(a) Wholesale.

(δείγματα), while commission-agents and interpreters facilitated the relations of seller and buyer. It was customary to purchase a return-cargo with the proceeds of sale, as foreign moneys might involve a loss on exchange at home: on the other hand it is to be noted that the coinage of Athens was accepted everywhere. At the ports of call on the voyage merchants usually contrived to ascertain where the prices were best, and sometimes they resorted to questionable artifices in order to rig the markets.

560. The centre of trade in each city was the market-place (ἀγορά), where most of the retail establishments were to be found, though shops were scattered over the rest of the city as well. At Athens, which city we may take as a type, business was carried on in permanent bazaars and colonnades (στοαί), under the wicker roofs (γέρα) of temporary booths (σκηναί, κληναί), or under umbrellas (σκιάδεια). Here the various trades and crafts were grouped, so that the separate corners (κύκλοι) came to be called after the articles sold—fish, meal, wine, pots, or slaves. (Cf. the phrases *εἰς τὰς χύτρας, πρὸς τοῦλαιον, εἰς τοῦψον, ἐν τοῖς λαχάνοις.*) Special importance attached to the monthly market, at which slaves were generally sold. The shops and show-rooms in the market were places of common resort for the citizens during the forenoon (ἀγορᾶς πληθούσης): hither it was customary for the master of the house (or afterwards a special slave, ἀγοραστής) to come and make the necessary purchases; the presence of ladies or female slaves as customers was not generally approved, though a good deal of the selling was done by women (*e.g.* ἀρτοποιίδες, λεκιθωπωλίδες). Porters (προῦνεικοί) might be hired to carry home purchased goods. Besides the regular markets, there were occasional fairs (πανηγύρεις), and the great religious and athletic festivals incidentally furthered commercial transactions on a large scale.

561. The control of all that went on in the Athenian market was entrusted to the ten ἀγορανόμοι, five of whom were assigned to the Peiraeus, and the ten μετρονόμοι, similarly distributed: for the supervision of wholesale trade the ἐμπορίον ἐπιμεληταί and σιτοφύλακες were appointed. The legal processes (included among the ἔμμηνοι δίκαι) for the settlement of trade disputes were various and comprehensive (*e.g.* τραπεζιτικάί, μεταλλικάί, κοινωνικάί): how complicated these suits might be, appears from the elaborate legal terminology contained in the Private Speeches of Demosthenes. So far as the State exercised any control over matters of business it did so ostensibly in the interests of the whole body politic (*e.g.* to secure the food-supply), and not in those of a particular trade: it was this motive which prompted, for example, the Athenian ordinances regulating the import of corn and the export of oil and shipbuilding materials, and the prices of millers and bakers; or forbidding tanners and cheesemongers to exercise their odorous callings in

the denser parts of the city. Harbour-dues, customs, and tolls, with so many communities set so close together, must often have proved a heavy burden on the trader, by sea and land: our information on the subject is unsatisfactory, but we may form some idea of the general system from those at Athens, of which the principal ones were: *πεντηκοστή* (2 p.c. on exports and imports), *ἐλλιμένιον* (harbour-due, perhaps charged on passengers, not on goods), *ἐκατοστή* (perhaps identical with the last), *ἐπώνιον* (1 p.c. on sales), *διαπύλιον* (gate-money); and lastly, the *δεκάτη* put on in 409 B.C. for all ships entering or leaving the Euxine.

562. Taken as a whole the most important commercial class were the bankers (*τραπεζίται*), whose functions were threefold: (a) money-changing; (b) money-lending; (c) the receipt of deposits (*παρακαθήκη*) for safe-keeping or for investment in their own or other concerns. (a) For the business of money-changing and testing (hence *δοκιμασταί*, *ἀργυρογνώμονες*) they kept by them scales (hence the nickname *ὀβολοστάται*), touch-stones (*βάσανος*), and a counting-table (*ἄβαξ*): a small commission or *agio* (*καταλλαγῆ*, *κόλλυβος*) was charged. (b) A loan might be friendly (*χρησις*), or formally contracted (*δανεισμός*, *δάνειον*), the latter class being divided according to the security (*δάνειον ἔγγειον*, *ναυτικόν*). With no rate of interest fixed, there was room for abuse (hence *ἡμεροδανεισταί*, *τοκογλύφοι*): for the calculation of interest two methods were in vogue—by the first a certain fraction of each mina lent was charged each month (so *ἐπὶ δραχμῆ* = $\frac{1}{100}$ per month, or 12 p.c. per annum), by the second a certain fraction (*e.g.* *τόκοι ἑφεκτοί*) of the whole sum lent became payable at the end of a year, or of a specified period, and this was the method employed for *ναυτικὰ δανείσματα*. In ordinary loans the commonest standards of interest were 12 and 18 p.c. per annum, payable on the last day of the month to the creditor or his representatives; sometimes the place of payment and class of coin were specified. In the case of a defaulter (*ὑπερήμερος*) the creditor had the right to seize (*ἐμβρατεύω*) the pledge (*ἐνέχυρον*) or mortgage (*ὑποθήκη*) on which the loan was secured, with or without an action of ejectment (*δίκη ἐξούλης*), according to the bond. In earlier times the temples (*e.g.* at Delphi and Ephesus) had served as the principal storehouses of money and valuables, but as business developed the bankers undertook this charge, and such deposits frequently formed a large proportion of their trading-capital (*ἀφορμῆ*). Again, bankers were constantly employed, like our lawyers, as confidential intermediaries or guarantors (*ἐγγνηταί*) in all money matters. Their accounts must have been carefully kept, by themselves and a staff of clerks, chiefly freedmen and slaves: the details would be copied down from memoranda (*γραμματεῖδια*) into day-books (*ἐφημερίδες*) and ledgers (*γραμματεῖα*, *βιβλίδια*), in which credit and debit accounts were shown on separate pages. Besides receiving deposits at home, the bankers were often able, by means of agents or fellow-bankers

Bankers in
business.

residing in distant places, to save their clients the trouble and risk of conveying large sums in cash; in such cases the banker's order authorizing the payment of the sum in question was accompanied by a proof of identity in the shape of a token (*σύμβολον*) or tally (*σικυτάλη*), and the payee, if not personally known to the banker on whom he drew, was required to produce a third party nominated in the original bond (*συγγραφή*). Drafts of this kind, though common enough between bankers and clients, never became so widely negotiable as the modern cheques and letters of credit, since there was no real 'fiduciary circulation' in Greek business.

563. Associations for religious, political (*ἐταιρείαι*), social and benevolent Companies. (*ἔθρανοι*) objects were so usual in Greece that the formation of various mining and trading companies (*οἱ εἰς ἐμπορίαν οἰχόμενοι*) on the analogy of these was but natural. Some such companies existed in the fifth century, though the evidence as to their conditions and legal rights is very vague: the fourth century witnessed a considerable development, and companies were formed for privateering, for insurance (after Alexander's time), and other objects, but banking seems never to have been one of them.

564. As a general rule the Greek theory of capital was quite elementary: indeed, as a modern scholar has remarked, 'dans ces sociétés on ne capitalise pas, on thésaurise.' Yet the Loans. principle of the loan was not uncommon among the Athenians—it was by this means that demes, phratries and temples disposed of their surplus of capital, and made it effective (*ἐνεργός*). The most frequent, and certainly the most lucrative method of investment was the bottomry loan (*ναυτικὸν δάνεισμα, ἔκδοσις*), which corresponds more or less to the 'pacotille' contract in the Middle Ages. The borrower made repayment conditional upon the success of his undertaking: in many cases therefore the loan answered the purpose of maritime insurance, but with greater risk to the underwriter than in our day. As a compensation for the risks involved, which were greatly increased by war, piracy, and unseaworthy vessels, a high rate of interest—*e.g.* *τόκοι ἐπόγδοοι* for a short voyage, *ἐπίτριτοι* for a longer one—was charged; the advance was made upon the ship, tackle, cargo, profits, conjointly or separately. As a precaution against depreciation, the borrower was bound to show goods of greater value than the loan (sometimes twice as great). If the money was lent only for the outward voyage (*ἐτερόπλους*), the lender would have a representative at the destination, or he would go himself, or send an agent: in this way it was convenient for merchants to advance money on a vessel in which they had occasion to travel themselves. In the case of a double voyage (*ἀμφοτερόπλους*) equivalent goods had to be loaded at the foreign port, as a security for final payment. The loan was a written contract (*συγγραφή*) in a formal style, with detailed

specifications, sometimes in duplicate: the terms of the bond gave the capitalist the right, in case of non-payment, to distrain the property offered in security, or, if that was inadequate, the remaining property of the defaulter. The actions arising out of these contracts belonged to the class called *ἐμπορικαί*: complications frequently arose from the fraudulent action of shipowners and captains, by which the letter of the charter-party was evaded for the sake of illicit gain.

565. We may distinguish three classes engaged in commerce and industry, (a) citizens, (b) non-citizens, (c) slaves. (a) The first class was in many cases diminished, in some altogether non-existent, by reason of political prohibition or social discountenance. The Dorian States especially hated the idea of manual labour for their citizens, and the Spartiates were absolutely forbidden to engage in agriculture, trade, or industry: on the other hand the Phocians, as late as 360 B.C., complained that one Mnason, with his 1000 slaves, was keeping an equal number of his fellow-citizens out of work. In the mercantile and manufacturing cities also the proportion of burgesses directly occupied in commercial and industrial concerns varied considerably, according to the degree of intellectual and artistic development or of political pauperism. Misfortune or necessity often compelled citizens to labour for a livelihood, as for example at Athens after the Peloponnesian War, where in better days public business had afforded both employment and remuneration. The commercial instincts of Greek citizens more often found an outlet in indirect ways, such as the investment of money or slaves in mines, banks, or factories: and many leading men derived their incomes from such sources. (b) The partial or complete abstention of the citizens from trade and industry left opportunities which their so-called inferiors—whether conquered races, resident aliens, or freedmen—were not slow to utilise; at Sparta the Perioeci, at Athens the Metics, were intimately associated with all kinds of trade, and the latter almost monopolised the business of banking: the most eminent banker of Greek history was a metic, Pasion, whose credit was everywhere accepted, and whose public services eventually procured for him the citizenship. At Athens, besides the poll-tax (*μετοίκιον*), metics had to pay for the right of sale (*ξενικὸν τέλος*), while burgesses were exempt. Freedmen fulfilled important duties as managers or chief clerks for citizens or metics, or engaged in business independently with slave-workmen. (c) But it was upon slave-labour, though more costly and less productive, that Greek commerce and industry chiefly depended from the beginning. (For the industrial employment of slaves see § 540.)

566. Although there seem to have been no proper guilds or corporations of workmen until the Roman supremacy, there were instances of association, whether local, such as the settlement of similar workmen (*συνεργοί*) in distinct quarters (e.g. *Κεραμεικός*), and the concentration of *μέτοικοι* at Peiraeus,

Commercial
and industrial
classes.

Associations
of workmen.

and of Jews at Alexandria; or commercial, such as the frequent combination of kindred trades, tanners and shoemakers, fullers and tailors, innkeepers and vintners. Except in certain cases (*e.g.* the heralds, cooks, and flute-players at Sparta) there was no obligation on the son to take up his father's trade or craft, though this would naturally be a frequent occurrence. Certain terms of apprenticeship obtained, for which a definite fee (*δίδακτρον*) was paid to a master of the craft (*ὁ ἐπιστάτης τῆς ἐργασίας*).

567. The cheapness of food-stuffs and the existence of slave-labour combined to reduce the wages obtainable by free labourers.

Wages.

Some difficulty is involved in the study of this question, as it is often uncertain whether the wages recorded in inscriptions and elsewhere include rations or not. The unskilled labour of porters, scavengers, farm-hands, was paid at the rate of 3 or 4 obols daily: the better class of workman received about 2 drachmae 3 obols, the lower class 1 drachma 3 obols (to include rations in both cases), and even an architect earned sometimes no more than 1 drachma a day, an instance of the confusion of artist and artisan. Single services were naturally paid for at a somewhat higher rate; for example, the porter in the *Frogs* demands 2 drachmae, and refuses 9 obols. A bath could be had for 2 obols, a cloak cleaned for 3: 20 or 30 drachmae were paid, according to size, for engraving an inscription, 110 for grooving a column. Far greater sums were realised by the State-physicians (and their trained slaves), artists of special repute, musicians, actors, and hetaerae: it is reported that Polycrates of Samos gave as much as 2 talents to secure the services of Democedes of Croton, and that Amoebaeus the actor was paid 1 Attic talent for each appearance. Teachers of the best class were able to obtain 500—700 drachmae yearly: a fencing-master received 300 drachmae for 2 months' instruction. Protagoras and Gorgias, the Sophists, charged 100 minae for a complete course of lectures; afterwards Sophists accepted less, even taking a fee (from 1 to 50 drachmae) for a single lecture, and we find that Isocrates learnt rhetoric of Evenus of Paros for 5 minae.

568. The Greeks cannot be considered an industrial race in the true

**The status
of Commerce
and Industry.**

sense of the term, for history shows that as they advanced politically they severed themselves from direct industrial employment. In the Homeric age personal labour was considered no degradation for free men, and even rulers possessed more than an elementary acquaintance with such useful arts as house- and ship-building. But the spread of commerce and colonisation wrought a change: culture increased, but so also did slavery; the one depreciated trade, the other diminished the dignity as well as the market value of free labour. There were exceptions: at Corinth, for instance, the industrial class was respected—for on industrial activity depended the production of commodities for exchange in foreign trade, and for the purchase of

necessaries—and the good understanding thus brought about was largely responsible for the long-continued prosperity of the city. The introduction of a money-economy in Greece, and the efforts of legislators like Solon, secured the traders and artisans political recognition, though still leaving abuses, which the tyrants readily turned to account: these in their turn, for reasons political and economic, deliberately favoured commerce and furthered industry by colonisation, public works, and other means. The prejudice against trades and handicrafts was most pronounced in Sparta: elsewhere, though the political disabilities might be reduced or removed, the social stigma was scarcely diminished—indeed, even the fullest development of democracy at Athens did but stereotype the conventional horror of hard work, and proclaimed leisure, and not labour, to be the citizen's privilege. The philosophers took the same view, branding as mean (*βάνανος*) and unworthy of citizens the necessary, if humble, occupations on which society rests, and discountenancing the principle of loans. Intellectual labour was hardly considered at all on its merits, and the artist often suffered with the artisan; the marvel is that, amid all this depreciation, mechanical skill and artistic taste should have attained so high a standard of excellence. The capitalist was generally exempt from adverse criticism, but usury met with special disfavour: doubtless there was some justification for this in the unscrupulous methods and exorbitant percentages to which lenders sometimes had recourse, and often the natural animosity between citizens and aliens was the real cause; but the truth remains that even the best-intentioned Greeks had no conception of the real significance of money and capital, and in their short-sighted superiority discouraged a free circulation, thus deliberately courting economic ruin.

Agriculture and other 'natural' branches of industry ranked somewhat better in social estimation: but even here the development of city-life tended to a disparagement of the countryman, so that *ἀστειός* became irreconcilably opposed to *ἄγροικος*. The consummation of the city-unit may have been brilliant, but it was hopelessly unbusinesslike: and against its literary, philosophic and artistic excellence has to be set a commercial and industrial system which rendered political economy an impossibility, and material prosperity a degradation. Fortunately the conquests of Alexander the Great inaugurated a new order of things: in the large towns of the Hellenistic period society grew more tolerant, commerce more cosmopolitan; and to Rhodes belongs the honour of establishing a system of mercantile law which has formed the basis of our modern codes.

Fusus, Metallum, Tela, in Smith's *Dict. Ant.*; St John, *History of the Manners and Customs of Ancient Greece*, book VI.; Ridgeway, *Bibliography. Origin of Metallic Currency and Weight Standards*; Cunningham, *Western Civilization in its Economic Aspects*, vol. I., book II.; Mahaffy, *Social Life in Greece*, chap. XIII.; Becker, *Charicles (Excursus on Markets and*

Commerce); Blümner, *Home Life of the Ancient Greeks* (transl. by Alice Zimmern), chap. xiv.; Blümner, *Technologie und Terminologie der Gewerbe und Künste*; Büchschütz, *Besitz und Erwerb im griechischen Alterthum*; Richter, *Handel und Verkehr der wichtigsten Völker des Mittelmeeres*; E. Meyer, *Die wirtschaftliche Entwicklung des Alterthums (Kleine Schriften)*; Boeckh-Fränkel, *Staatshaltung der Athener*; Iwan von Müller, *Die griechischen Privatalterthümer*, §§ 10-12; Zimmern, *Greek Commonwealth*, part III.

VI. 8. MEASURES AND WEIGHTS.

A. MEASURES.

569. THE ancients held that the simple measures (*μέτρα*), such as the finger, foot, palm, span, cubit, and fathom, were derived from the various parts of the human body (Heron Alex. tab. I., Vit. III. 1, 5). Among primitive and unmixed races, where all live under the same conditions, there will be little variation in stature, and consequently a foot of average size will give a standard sufficiently accurate for practical needs. When, however, different races come into contact, or when different habits of life cause variation in stature among various classes of a single race or a single community, variations of the foot and cubit will naturally be found. As the progress of civilization demands greater exactitude, the inter-relations of various standards will be carefully ascertained by the use of some natural object of uniform size, such as the barley-corn of the English linear system. Lastly, with the advance of science efforts are made to get some general units fixed with greater accuracy, and to bring these into relation with the measures of capacity and standards of weight.

Measures of capacity are first obtained from natural products of a uniform size, such as the hen's egg used as their unit by the ancient Irish and the Hebrews, the small gourd now used at Zanzibar, and the joint of the bamboo, and the cocoa-nut employed by the Chinese and the Malays. The *cochlear* (from *cochlea*, a mussel-shell) is the smallest Roman measure, whilst it is not improbable that the Greek *κύαθος* originally meant a gourd. In measures so derived there are naturally many local variations, and universal standards, such as those established in this country in 1824, can only be set up by a strong central authority. In Greece we have two notable instances of such legislation: Pheidon of Argos fixed the standard measures used by the Peloponnesians, and Solon fixed the Attic standards of measures and weights. On such occasions it is possible that an attempt may be made to fix certain relations between the standards of length, capacity, and weight. From

what has been said, there is no need to suppose that the Greeks had to go to Babylonia or Egypt, as has been generally held, to obtain a foot standard.

570. In Greece proper there were three different foot standards—Attic, Olympic, and Aeginetic. The Attic (= 295·7 mill.) is almost identical with the Roman (296 mill.), and a little less than the English (301 mill.): the Olympic (= 320·5 mill. as calculated from the measurement of the *Stadion*) was derived, according to tradition, from the foot of Heracles. The Aeginetic foot (as taken from the temple measurements) was 333 mill. A foot used at Pergamum and named *ποὺς φιλεταίρειος* after king Philetaerus, measured 330 mill., and was thus practically identical with the Aeginetic. The three last named are much larger than the Attic, and were probably derived from a people of larger stature than the indigenous Athenians, an inference confirmed by the fact that the *pes Drusianus* used in Germany and Gaul at the time of the Roman conquest was 330 mill., *i.e.*, the same as the Philetaerean and the Aeginetic foot. As the Olympic foot is inferred from the measurement of the *stadion* in its present state, it may not have differed from the Aeginetic and Philetaerean. Certainly it is unlikely that it was smaller, as the 'foot of Heracles' is spoken of as the largest standard known. The foot measure is mentioned in Homer (*ἑκατόμπεδος*), but of course its length is unknown. Homer has also *palm* (*δῶρον*, probably = later *παλαιστή*), *cubit* (*πυγών*, *πυγούσιος*), *fathom* (*ὄργυια*, *πλέθρον* (*πέλεθρον*)). The *πυγών* was a short cubit, the distance from the point of the elbow to the knuckles. *πῆχυς* does not occur as the name of a measure in Homer. The smallest linear unit of which we hear is the *finger-breadth* (*δάκτυλος*), (Lat. *digitus*), but this was apparently subdivided into five barley-corns. 2 *fingers* = 1 *κόνδυλος*, the middle joint of the finger; 4 *fingers* = 1 *handbreadth* or *palm* (*παλαιστή*, Hom. *δῶρον*); 8 *fingers* = 2 *palms* = 1 *διχάς* or *ἡμιπόδιον*; 10 *fingers* = 1 *span* (*σπιθαμῆ*); 16 *fingers* = 1 *foot* (*ποὺς*); 20 *fingers* = *πυγών* (Hom., Herod. II. 175), the distance from the point of the elbow to the knuckles; 24 *fingers* = 1 *πῆχυς*, *cubit*, *ell*, the distance from the point of elbow to the tip of middle finger; 2½ *feet* = 1 *βῆμα* (Lat. *gradus*), *pace*; 6 *feet* = 1 *fathom* (*ὄργυια*), the space which a man can stretch with both arms. *πλέθρον*, orig. the breadth of the *γῆς*, acre, the space lying between the *ὄρα* or boundary stones, which formed the longer sides of the patch = 100 *feet*; its square became the regular unit of land-measure with the Greeks of classical times.

571. For the higher measures of length convenience demanded higher denominations, one of which was regarded as a new unit, although continuity with the rest of the system was preserved by making it a multiple of the foot. These larger measures may be regarded as independent in origin; for as the smaller measures are based on natural objects, so the larger were derived from nature and from distances which occur in ordinary life. Homer expresses

Standards
of length.

Road
measures.

distances by a stone-cast (*Il.* III. 12, cf. *Thuc.* v. 65; *Polyb.* v. 6), a quoit-cast (*Il.* XXIII. 431), a spear-cast (*Il.* xv. 358), by the distance which a man can reach with a spear (*Il.* x. 357), and by the still more indefinite phrase 'as far as man can be heard when he shouts' (*Od.* v. 400), and by standards derived from agriculture (*Il.* x. 352, the breadth of the acre-piece of ground ploughed in one day by mules). Time was made the measure of the longest distances (a method still much employed for measuring distances), e. g. a day's journey by an active traveller (*εὐζωνος ἀνὴρ*), or a journey of a day and a night, or on horseback, or in a merchant-ship. The practice of measuring by stations (*σταθμοί*) falls under this head, as such distances were fixed with reference to the endurance of man and horse long before they were actually measured out by stades.

The *στάδιον* (Dor. *σπάδιον*) always contained 600 feet, no matter what the length of the foot might be. The Doric *σπάδιον* (*σπάω*) indicates that it was the distance traversed in a single draught by the plough. It was the length of the *γύης*, *plough-gate*, from *γύης*, *plough*, just as the *πλήθρον* was its breadth. The *stadion* always contained 100 *ὄργυιαι* or 600 feet, no matter what the size of the foot might be. As the Homeric *γύης* was 10 *ὄργυιαι* in breadth, the *stadion* was thus ten times the breadth of the *γύης*. A similar proportion exists between the length (*furlong*, *furrowlong*), of English and Irish acre-strips. As the Greeks had provided themselves with the other measures by purely empirical means, it is not likely that they went to the East to borrow the *stadion*, as has been commonly held; it is possible that they derived it from their own system of agriculture, which was not of eastern origin. The *stadion* was in historical times the length of the race-course, and was the regular unit of *road* measure, and in later times the regular unit of geographers and astronomers. *δίαιλος* (or *διστάδιον*), so called from *αἶλος* (= *αἶλαξ*), the old name of the *stadion*, probably meant originally 'double furrow,' and then came to mean a course up and down the *stadion*. *ἵππικόν*, the course for horse-race, = four stades, as they ran twice up and down the *stadion*; *παρασάγγης*, a Persian *road* measure (mod. *farsang*), used by Greeks writing on Asia Minor, = 30 stades.

572. Measures of surface are necessarily employed in every community, as soon as it begins to cultivate land. Tradition says that

Land measures. from such a necessity geometry arose (*Herod.* II. 109). As with the itinerary measures, the original unit of the system was not a specific number of feet, but some natural quantity, which at a later date was harmonized with the smaller measures. These measures are essentially measures of surface, though often used as measures of length (e. g. *plethron*). A natural measure of this sort was a strip of land of considerable length and moderate breadth, being the amount ploughed in one day by a yoke of oxen (cf. *γύης* = 'plough' and 'acre,' and Lat. *iugum* = 'yoke' and 'acre'). The later Greeks used the square *plethron* = 10,000 feet, which was also the size of the Italian *vorsus*. The *γύης* of the

Heracleian tables probably represents a piece of land 5000 feet long and 100 feet broad, *i.e.* 50 *plethra*. In Sicily and Cyrene land was measured on a system common in various parts of the mediaeval and modern world. The *medimnus* as a land measure in each region represents as much land as could be sown by a medimnus of seed, but in each case the system was probably native and not introduced by the Greeks. In Egypt *σκακάριον δεκαόργγιον*, a term derived from the amount of seed required, = square of 10 *όργγια*.

573. The most important products of Greek agriculture were on the one hand wine and oil, on the other various kinds of corn, whence naturally arose two kinds of measures—*liquid* and *dry*. The smaller units are common to both. The *κύαθος*, *cyathus* (possibly originally a kind of gourd), was the common unit containing about 4 centilitres = 0.8 English pint; *δέξυβαφον* (*acetabulum*) = 1½ *cyathi*; *κοτύλη* in Attica, a sort of bowl (= *τρούβλιον*, in other parts of Greece and Sicilian *ήμίνα*) = 6 *cyathi*; *ξέστης* = 12 *cyathi* (a loan word from Roman *sextarius*). The systems now diverge.

Measures of capacity.

Liquid (*ύγρά*): the *χοῦς* (Lat. *congius*, from Gk *κόγγη*) = 12 *κοτύλαι*; its half, *ήμίχους*, is also found; *ήμίάμφορον* (or *ήμικάδιον*), Lat. *urna*; *άμφορεύς* (Hom. *άμφιφορεύς*), *αμφhora*, the large two-handled wine-jar, being used for the storing of wine, was the chief unit of liquid measure. The Roman *αμφhora* = 576 *cyathi*; *μετρητής*, commonly = *άμφορεύς*, though properly larger.

Dry (*ξηρά*): the *χοῖνιξ* = 4 *κοτύλαι*, at Athens was a day's allowance for a man. 4 *choenices* = *ήμέκτον*; 8 *choenices* = *έκτεύς* (or *μόδιος*): its name shows that it is properly one-sixth of the chief unit *μέδιμνος* (= 48 *choenices*), but at Athens *μέδιμνος* = 8 *μόδιοι*.

B. WEIGHTS.

574. Man does not begin to use the balance and weights until he has learned to use gold, this and copper being the first known of the metals. When he first barterers these metals, he appraises them by measures based on the parts of the human body, a method which continues to be employed for copper and iron long after the art of weighing has been invented, or he estimates his gold dust by certain natural units of capacity, *e.g.* the goose-quill (cf. Herod. iii. 97 *χοῖνιξ χρυσίου*), and finally fixes the amount of gold equivalent to different kinds of cattle, weapons, etc., by setting gold-dust in a rude balance against a certain number of the natural seeds of plants. As the cow was the chief unit of barter, its value in gold became the chief metallic unit. In all systems of weight except the French decimal system the smallest unit is some natural seed, wheat-grain, barley-corn, rice-grain, siliqua or *keration* (carat), the seed of the carob, the ratti (seed of *abrus*)

Origin of weight standards.

precatorius). The English pennyweight is based on 32 wheat grains = 24 barley-corns or 24 Troy grs. But as 4 wheat-grains = 3 barley-corns, a relation well known to the ancients, the Troy grain was simply the barley-corn.

575. The Greeks like all other peoples based their weight system on natural units, their smallest being the barley-corn (*ἐλάχιστον δὲ γίνεται κριθή*, Theophr. *Λαφ.* 46).
The Attic weight-table for gold and silver is as follows:

								Grams.
1	barley-corn	...	...	...	...	...	...	0.060
1½	"	= κόλλαβος	...	...	...	...	...	0.0909
3	"	= τεταρτημόριον (quarter-obol)	...	...	...	...	...	0.181
6	"	= ἡμιώβολος (half-obol)	...	...	...	...	...	0.363
12	"	= ὀβολός (obol)	...	...	...	...	...	0.728
72	"	= 6 obols = δραχμή (drachm)	...	...	...	...	...	4.373
144	"	= 12 obols = 2 drachms = στατήρ ('weigher')	...	...	...	...	...	8.747.

The difference between the old Greek barley-corn and the English barley-corn (Troy grain) is less than .004 gram. As its name implies the *stater* was the true unit of the system, its weight in gold being equivalent to a cow. (See § 578.)

Later on the *μνᾶ* (mina) and the *τάλαντον* were added.

								Grams.
7200	barley-corns	= 50 staters = μνᾶ (mina)	=	...	...	...	...	437.35
432,000	barley-corns	= 3000 staters = 60 minae = τάλαντον (talent)	=	26241.				

The *μνᾶ* (cf. Sanskr. *mana*, Hebr. *maneh*) was originally not a weight, but a measure of capacity, probably based on the gourd. It does not occur in Homer, the only weight there mentioned being the little gold *τάλαντον* (ox-unit). The *μνᾶ* was translated into a weight-unit by weighing its contents, as has been the case with the Chinese and Cambodian pound (catty), based on the cocoa-nut, and the English *bushel* and *quarter*. Thus Darius melted down the gold-dust brought as tribute and poured it into jars (Herod. III. 94); as the capacity of the latter would be known, the measure of capacity could be converted into a higher weight-unit. The *mina* was adjusted to the original stater (ox-unit), as the Chinese and Cambodian catty has been fitted on to the tale (ounce).

576. Among barbarous and semi-civilized peoples the highest weight for merchandise universally employed is the *load*, that is, the amount which a man of average size and strength can carry. The load varies in different parts of Africa and Asia, but the Chinese have introduced the picul (load) into their commercial weight system, fixing it at 100 catties, whilst the Cambodians have even added both catty and picul to their silver weight system. The Greek commercial *τάλαντον* of classical times had a similar origin. The Greeks used the *load* as a unit (*Ar. Ach.* 214 φορτίον ἀνθρώκων) and a ship's burden was reckoned in *loads* (φορτία, Hes. *Op.* 641), and so too in

Weights for merchandise.

later times (Athen. v. 44 ἐρεῶν τάλαντα δισμύρια καὶ ἕτερα δὲ φορτία δισμύρια, cf. μυριόφορτος, μυριοφόρος, used of ships). The *load* and the *talent* were thus the same, and both were equal to the *amphora*, in which tonnage was commonly reckoned in Roman times.

577. Athens did not strike money till long after Aegina, and she appears to have used the didrachms of that island, and thus the Aeginetic standard came into use there for silver and other less valuable commodities, serving much as our avoirdupois weight, but the ancient ox-unit always remained the standard for gold. When Solon for the first time struck money at Athens he made a new standard for his coinage based on this old unit (Arist. *Pol. Ath.* 10). He made 60 new minae out of 63 old ones. But as the post-Solonian stater = 135 grains Troy, the pre-Solonian stater = 128.5 grains Troy. It would thus appear that the ox-unit at Athens was slightly lower than that at Mycenae in the Bronze Age. As the standard was fixed by 144 barley-corns, and the barley-corn was liable to slight variation, it was but natural that differences should occur between one state and another, as was the case between different towns in England before the fixing of the standard in 1752.

But though Solon used a revised form of the ancient standard for his silver coinage instead of adopting the Aeginetic, the latter standard was not

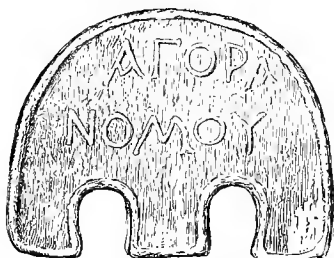


Fig. 97. Attic Half-mina (Roman period) belonging to the ἀγορανόμος ('Clerk' of the Market).



Fig. 98. Cyzicene Stater weight.

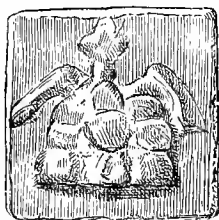


Fig. 99. Aeginetan Hemiteton ($\frac{1}{2}$ Mina).



Fig. 100. Cyzicene Half-stater weight.

expelled from Athens but continued in use for commercial purposes in the buying and selling of less valuable commodities, as is proved not only by various weight-pieces which have survived but by a decree of the second century B.C. (C.I.G. 123, 4), which fixes the *commercial* mina at 138 drachms (*ἀγέτω δὲ καὶ ἡ μνᾶ ἡ ἐμπορικὴ Στεφανηφόρου δραχμῶν ἑκατὸν τριάκοντα καὶ ὀκτῶ πρὸς τὰ στάθμια τὰ ἐν τῷ ἀργυροκοπέῳ*). The drachms here mentioned are the ordinary silver drachms struck in the mint, which was attached to the shrine of Theseus Stephanephorus, where, as the inscription shows, the standards were kept. But 138 Attic drachms = 9315 grains Troy = 50 Aeginetic didrachms (1 mina) of 186.3 grains each, the normal weight of the Aeginetic didrachm at that period. The Aeginetic talent therefore = 558,900 grains, or about nearly 80 lbs. avoirdupois.

Many ancient weights survive; they are of very various forms (Figs. 97—100), but commonly bear the stamp of the State, *e.g.* tortoise of Aegina (Fig. 99), tunny for Cyzicus (Fig. 100), axe for Tenedos, etc.

Hultsch, *Reliquiae Scriptorum Metrologicorum*, *Metrologie*: W. Ridgeway, *Mensura* (Smith's *Dict. of Antiq.*); *Origin of Stadion* (*Jour. of Hell. Stud.*, 1888); *Origin of Metallic Currency and Weight Standards*.

VI. 9. MONEY.

578. IN the Bronze Age the peoples of the Aegean, though possessing gold and even silver, and having copper in abundance, were yet in the barter stage, when every kind of property is used for the purchase of other commodities, the precious metals themselves being treated like every other article. Not a single coin has been found in remains of this period, though the discovery of two pairs of gold balances in a shaft-grave at Mycenae, and the fact that the gold rings found in the shaft-graves were made to a standard of about 135 grs. Troy, show that gold was appraised and exchanged by weight.

In the early Iron (Homeric) Age the Greeks were still in the barter stage. Wherever the cow has been domesticated, it has been always the chief unit of barter, in terms of which the values of other commodities are appraised, as is still the case among the Ossetes of the Caucasus and many other tribes. Not only between animals of different kinds, but also between animals of the same kind but of different ages is there a well defined relation and an accurate adjustment to the common standard unit of the full-grown cow. Thus among both ancient Romans and modern Ossetes a cow = 10 sheep. So was it with the Homeric Greeks, for all values—whether of slaves, silver bowls, bronze caldrons, or arms such as those of Glaucus—are estimated in cows. As amongst other nations, the slave served as an occasional higher unit, the ordinary slave woman

being worth about three cows. But though all Homeric values were reckoned in cows, gold was in use with a unit of its own called *τάλαντον*, 'weight.' As no values are stated in talents of gold, it is plain that this metallic unit came into use later than the cow, and the cow unit was earlier in origin than the gold unit.

There is distinct literary evidence that the Homeric *talanton* was the same as the gold *στατήρ* of the classical period, and in the temple ritual at Delos, if a man offered a stater of gold, he was said to have offered a cow (*βοῦς*). Again, in the foot-race the second prize is an ox, the third a half-talent of gold (*Il.* XXIII. 750-1). The half-talent was thus less in value than an ox, and it is therefore probable that it = half-ox, and the *talanton* = ox. This is confirmed by the fact that in all countries where a ready-made metallic unit has been borrowed, it has to be adjusted to the older barter unit, e.g. the Russian rouble to the reindeer of the Samoyedes and the cow of the Ossetes, the Roman silver *uncia* to the Irish cow, and the Roman gold *solidus* to the cow unit of the Teutonic peoples.

579. That the nations on the north, east, and south of the Aegean had like the Greeks used the precious metals long before the invention of coinage is certain, but (as in the Bronze Age of Mycenae and in the Homeric Age) all dealings were at first effected either by weighing or by measure, or by some rough means of appraisement as in many parts of Asia to-day. For convenience gold was commonly kept in small lumps of the weight of the *talanton* or *half-talanton*. Two round bullets of gold with punch marks weighing respectively 72 and 72.5 grs. (probably half-talents) have been found in a late 'Mycenaean' tomb in Cyprus. In Asia Minor and Egypt gold had long been weighed on what was practically the same unit as in Greece, as was but natural, since the gold unit in each region was based on the cow, the oldest Egyptian gold unit known being termed 'cow-gold.' It is probable that gold and silver in these countries, as in Cyprus, were kept in small lumps of the weight of a *shekel* ('weight'): thus Abraham gave 400 pieces of silver 'current with the merchant' to Ephron. But these pieces of metal were in no sense coins, for there was no stamp to guarantee the purity of the metal or the weight of the lump. The introduction of such a stamp was the great step taken by the Lydians, who according to Herodotus (I. 94) and Xenophanes of Colophon were the first to coin money of gold and silver.

Now, in the time of Darius and probably for a long time before, gold was to silver in part of Asia Minor as 13 : 1, a very inconvenient relation for purposes of exchange. The Babylonians especially seem to have felt this difficulty, and readily obviated it by making a new standard for silver by which (as gold : silver = 13 : 1) 10 pieces of silver of 169 grs. each = 1 gold shekel (ox-unit) of 130 grs. This standard was known in Asia Minor and Greece as *Babylonian*, the talent of which = 78 Euboic minas, a

The origin
of coinage.

proportion which, if the Euboic stater is taken as 130, gives 169 grs. Troy as the weight of the *Babylonian* silver shekel. There was also another standard used like the Babylonian exclusively for silver, of which we have no literary evidence, but which is abundantly proved by the weights of coins in classical times, and which has been termed *Phoenician* by metrologists. As the name implies it seems to have arisen along the coast of south-western Asia Minor. The Phoenicians had in their hands much of the trade of Cilicia, the source of the chief supplies of silver in western Asia (Herod. iii. 89), whilst from about 1200 B.C. they had got control of the rich silver mines of Spain, and accordingly silver was very plentiful in Palestine in the time of Solomon (950 B.C.). It is most probable that the relation between gold and silver was very different from that which held in Babylonia and other parts of western Asia. If gold : silver = 17 : 1 in Phoenicia, the gold shekel of 130 grs. = 10 silver pieces of 220 grs. each, which is practically the actual weight of the coins themselves. The Lydians possessed great stores of gold in Mt Tmolus and in the sands of the Pactolus, but this gold was not pure, for it was a natural alloy of gold and silver, and was accordingly called by Herodotus λευκὸς χρυσός and by Soph. (*Ant.* 1038) 'electrum from Sardis' in contrast to the 'gold of Ind,' i.e. the pure gold from the Oxus. Analysis has shown that the ordinary electrum contained about 27 per cent. of silver, and 73 of gold: hence it stood to pure gold as 3 : 4, and to silver as 10 : 1 (gold : silver = 13 : 1).

580 When the Lydians invented the art of coining, their issues were in their native 'white gold,' for it was in this metal that the great wealth of the Lydian kings down to Croesus consisted. The first Lydian coins were rudely executed staters and smaller denominations struck on the Babylonian and Phoenician (silver) standards, the staters weighing about 167 grs. and 220 grs. respectively. The two series were probably struck to coincide with the silver in use in the interior and on the seaboard of Asia Minor. As electrum was to silver as 10 : 1, it was a very convenient proportion for exchange, a single standard serving for both metals. Ten silver pieces of 167 grs. each = 1 electrum piece of 167 grs. = 1 pure gold shekel of 130 grs., and 10 silver pieces of 220 grs. each = 1 electrum of 220 grs. = 167 grs. ($1\frac{1}{3}$ stater) of pure gold. The division into thirds and sixths is a regular feature in the coinage of the Asiatic coast towns. The earliest Lydian coins have been commonly assigned to Gyges, who according to the chronology of Herodotus usurped the Lydian throne about 700 B.C., and according to the Assyrian evidence was reigning as late as 650 B.C., but there is no reason why coins may not have been issued under his predecessor Candaules or even earlier. Indeed, the literary tradition makes it probable that the invention of coinage took place soon after 800 B.C. This harmonizes with the date for the earliest coinage in Greece (747 B.C.) and with the fact that by the eighth century the Cypriotes had made little ingots with a rude mark on them.

Lydian and
Persian coin-
age.

The earlier Lydian coins are simply bullet-shaped ingots (like the old Japanese bean-money). What is termed the obverse is plain, or rather striated, as a series of lines in relief run across its face, whilst the reverse has three incuse depressions (Fig. 101), that in the centre oblong, the others



Fig. 101. Lydian electrum coin.

square. A stater (219 grs.) bearing in central incuse a running fox, in the upper square a stag's head, and in the lower an X-like device, may be regarded as the earliest coin yet known. A series of coins showing a lion's head with open mouth, and on reverse incuse sinkings, has with great probability been assigned to Alyattes the father of Croesus (568—554 B.C.). The latter introduced a double currency of pure gold and silver instead of the primitive electrum, and issued a pure gold stater long remembered as the *Κροΐσειος στατήρ* (just as the famous gold stater of Philip II of Macedon was termed *Φιλίππειος*). This stater bears on obverse the foreparts of a lion and a bull facing each other, on reverse an oblong incuse divided into two parts (Fig. 102). The silver coins have the same types. These coins

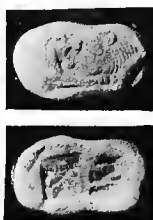


Fig. 102. Coin of Croesus.

probably continued to circulate under Cyrus and Cambyses, for neither of them seems to have struck money. When Darius Hystaspes (522—485 B.C.) organized the Persian empire, he struck a gold stater on the cow-unit like that of Croesus, and which was named after him the *Δαρεϊκός* (just as later the stater of Ptolemy was called *Πτολεμαϊκός*). These Darics became the gold currency of all the Greek towns not only of Asia Minor, but also in the Islands, and made their way in large quantities into the cities of the mainland of Hellas, and wrought as much harm in disuniting the states of Greece as did the staters of Philip II later on.

They bear on the obverse the king of Persia bearded, crowned and clad in a long robe; he kneels towards right on one knee; on his back is a quiver,

in his right hand a long spear, and in his left a bow (Fig. 103), whence the Greeks called these coins 'Archers' (τοξόται). The chief Persian silver coin was the *siglus* (σίγλος or σίγλος Μηδικός). This was struck on the



Fig. 103. Persian Daric.

Babylonian standard (168 grs.). The *siglus* was the half of this shekel, and accordingly weighed 84 grs. Xenophon says that it = $7\frac{1}{2}$ Attic obols, *i.e.* 84.3 grs., which is about the normal weight of the numerous existing specimens. The type is the same as that of the Daric, the latter name being even sometimes applied to the silver coin.

581. The essence of a coin is its type, which guarantees its purity and weight, though amongst primitive peoples it only guarantees the quality of the metal (as was the case in Japan down to the last century). The devices in the incuses of the early Lydian coins, the type of lion's heads on the series of later electrum, and the forepart of a lion on the coins of Croesus, were doubtless stamps guaranteeing the quality of the metal, though not necessarily the weight of the coin. The lion was the device on the royal signet. Other types were probably the devices on the signet of the king or on those of officials responsible for the issue. This is fully borne out by the type on the Daric, for as his signet found at Babylon shows Darius himself, so his coins bear his own image. Thus Augustus placed on his coins issued in Asia a sphinx, which was the device on his own signet, and Seleucus, whose signet bore an anchor, placed that device as a symbol in the field of the coins which he issued in Syria during Alexander's life, and later on placed it as the main type on the coins struck in his own name. The connexion is thus very close between the signet of a king or potentate and the type of his coins, for a coin is nothing more than a piece of metal impressed with the signet.

582. The great cities of Ionia soon adopted the Lydian invention, and coins of electrum were issued by Miletus (couchant lion with head turned back), Ephesus (stag and bee), Clazomenae (forepart of winged boar), Phocaea (seal), Chios (sphinx), Samos (forepart of bull looking back), etc. The staters of southern Ionia are usually about 220 grs., whilst those of Phocaea and all towns as far north as the Propontis are on what is called the *Phocæic* standard (252 grs.). The earliest coin with a Greek inscription is an electrum stater (216.5 grs.) found at Halicarnassus, but probably of Ionic origin. It bears on reverse

Electrum
coins of the
Ionian cities.

three incuse depressions, in shape like those on Lydian and Milesian coins, on obverse a stag feeding and the legend, which clearly refers to the stag, Φάνος ἐμὶ σῆμα, 'I am the badge of Phanes.' (So an archaic gem with a dolphin is inscribed, 'I am the device of Thersis; do not break me.')

Phanes was probably some potentate, who issued coins stamped with his own badge, but why he used such a device we cannot say. *Hectae* of electrum, issued in great numbers by the mints of Phocaea and Mytilene, formed the chief currency of the coasts of western Asia Minor during the whole of the fifth and a large part of the fourth century B.C. To secure uniformity in coinage these two cities made a monetary convention about 410 B.C., in which it was agreed that each city should mint in alternate years coins of identical fineness and weight. The Phocaic staters are mentioned (Thuc. iv. 52; Dem. xl. 36, and in inscr.). Cyzicus struck from an early date a numerous series of electrum coins with various types, but always bearing a tunny. These Cyzicenes of electrum and the pure gold Darics formed the chief gold currency of the Aegean and Greece until both were superseded by the gold staters of Philip II. The Cyzicene (258 grs.) contained about equal proportions of gold and alloy and was equal in value to the pure gold Daric.

583. Croesus had struck silver pieces, but silver may well have been coined still earlier, for there are silver coins which seem more archaic than the silver of Croesus, or even than the Lydian electrum coins of some of his predecessors. The great majority of these archaic coins belong to Aegina and the Aegean isles—Carteia in Ceos (with the type of amphora), Siphnus (dove), Delos? (two dolphins), Naxos? (cantharus), Paros (goat and dolphin); but others were probably issued on the coast of Asia and the adjacent islands, e.g. Miletus (forepart of lion looking back, lion's head), Cyme (forepart of horse), Cyzicus (head and tail of tunny), Dardanus (cock), Chios (sphinx), and Cos (crab). It seems therefore certain that there was a silver currency on the coast of Asia Minor and in the Aegean islands very early. There can be no doubt that from the middle of the sixth century B.C. and onwards silver coins were issued by various towns on the coast of Asia Minor with types which in many cases continued down into the Roman period, though others again did not begin to strike silver until the beginning of the fifth century. The chief types in this area are Miletus (forepart of lion turned back, lion looking back at star, etc.), Ephesus (bee and stag), Colophon (lyre), Clazomenae (forepart of winged boar, swan, Anaxagoras), Erythrae (club and bow in case), Cnidus (forepart of lion, and head of Aphrodite): in Lesbos the chief towns issued silver and also *potin*; Mytilene (calf's head, *silver*, two calves' heads facing, tree between) (Fig. 104) *potin*, Methymna (boar and head of Pallas, *silver*; two boars' heads facing each other, *potin*); of uncertain mint is negro's head, *potin*. The *potin* coins, which contain only 40 per cent. of silver, were adjusted to the pure silver coins. Chios (sphinx and amphora), Naxos (head of satyr,

Silver coin-
age.

cantharus), Tenedos (janiform head and double-axe), Grynum (oyster), Calchedon (ox standing on ear of corn), Cyzicus (tunny), Byzantium (ox standing on dolphin), Olbia (sea-eagle carrying off fish), Panticapaeum (lion's scalp facing).

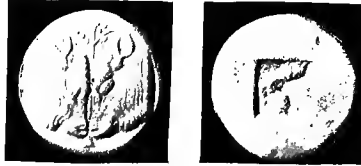


Fig. 104. Potin coin of Mytilene.

584. As there were close trade relations between the coast towns of Asia Minor and the chief emporia of Greece Proper, the art of coining quickly made its way across the Aegean. As the earliest issues of the Ionic cities were in electrum, so was it with the earliest mintages of Greece, for there is an unique electrum coin of Aegina, and the earliest coins attributed to Chalcis and Eretria in Euboea are also in that metal. All tradition is unanimous in representing Pheidon, the despot of Argos, as the first to coin money in Greece, and to have done that in Aegina. Strabo (following Ephorus) says that Pheidon devised the measures known as 'Pheidonian' standards of weight (see § 569), and coined money 'both the other kind and that in silver' (*καὶ νόμισμα κεχαραγμένον τό τε ἄλλο καὶ τὸ ἀργυροῦν*). It has been pointed out above that there exist many Aeginetan silver coins far more archaic in appearance than the silver struck by Croesus and even the electrum coins issued by some of his predecessors. There is likewise an unique Aeginetic coin of electrum. From these two facts it follows that coining in both electrum and silver took place at a very early date in Aegina, and that it is to the issue of electrum that Strabo's phrase—'the other kind'—refers. Pheidon's date is a matter of dispute. Pausanias (vi. 22. 2) says that the Pisatans in the eighth Ol. (747 B.C.) brought to their aid against the Eleans Pheidon of Argos and that along with him they celebrated the festival. On the other hand Herodotus (vi. 127) says that amongst the suitors of Agariste, daughter of Cleisthenes despot of Sicyon, came Leocedes, 'son of Pheidon, the despot of the Argives, that Pheidon, who had made their measures for the Peloponnesians, and who had of all Greeks waxed most violent, and had expelled the Elean presidents of the games and himself held the festival.' Both writers plainly refer to the same despot, but the dates are irreconcilable, for as Cleisthenes the Athenian lawgiver was son of Agariste, her wooing cannot have been much earlier than 560 B.C., and consequently Pheidon would have reigned about 600 B.C. It has been proposed to read 28th Ol. for eighth Ol. in Pausanias, but this would make Pheidon help the Pisatans in

Coinage on
the mainland
of Greece.

668 B.C., which does not suit the passage in Herodotus. On the other hand Strabo (after Ephorus) says that Pheidon was tenth in descent from Temenus, according to which Pheidon's date ought to fall about 750 B.C., and this shows that the text of Pausanias is sound. The statement in the text of Herodotus is due either to a mistake of the historian himself, who may have confused a Pheidon who was father of Leocedes, with the elder and more famous Pheidon, or it may be that the words, which explain who Pheidon was, are due to a marginal note of some ancient scholar. In any case the explicit statements of Ephorus and Pausanias must outweigh an incidental allusion in Herodotus. If Pheidon, as is most probable, lived in the middle of the eighth century B.C., he preceded Gyges, who is credited by modern writers with the first striking of money, but as it has been pointed out above, there is no reason why Candaules, the predecessor of Gyges, or some still earlier king of Lydia, should not have invented the art of coining. If Gyges had been the first to do so, it seems strange that this invention should not have got attached to one whose name was so familiar to the Greeks, yet no ancient writer attributes it to him. We may infer that the reason why this was so, was that the art of coinage was known before the time of Gyges. If money was struck in Lydia before 750 B.C., Pheidon could have borrowed the invention, and struck not only electrum like the Lydians, but also silver. There is therefore no reason for refusing to credit Pheidon with coining money in Aegina in the middle of the eighth century B.C.

585. It has been commonly held that the Greeks borrowed their weight standards along with the art of coinage from Asia Minor in the seventh century B.C., but it is absolutely certain that they habitually weighed gold many centuries earlier, and that too on the standard known as Euboic by Herodotus, and termed Euboic-Attic by modern writers. Thus in one of the shaft-graves of Mycenae two pair of balances were found along with vast quantities of gold objects, whilst the gold rings and one silver ring there found are clearly made on a standard of about 135-140 grs. Troy. So silver, when it came into use in prehistoric times, was weighed on the same standard as gold. In historical times, though silver money was struck on special standards in some parts of Greece, gold was universally weighed on the ancient unit, which always continued to be employed for silver in the *Euboic* system, a circumstance which caused this primitive weight unit to be termed *Euboic* by Greek writers, even when referring to its use in Asia (Herod. III. 89). It is certain that gold was being weighed on the ancient ox-unit in Aegina before the introduction of coinage, for the gold ornaments from a prehistoric grave in Aegina are made upon that unit like the rings of Mycenae.

Weight standards of coinage.

But a standard never used for gold, but only for silver and less valuable commodities, originated in Aegina, hence termed *Aeginetic*. Gold was scarcer in Greece than in Asia, for even in the second half of the fifth century B.C.,

when Athens possessed the gold mines of Thrace and Thasos, gold : silver = 14 : 1. Hence it is highly probable that, at an earlier date, the ratio was 15 : 1. Pheidon was said to have made weight standards (Strabo) as well as measures (Herod.) for the Peloponnesians. The earliest silver didrachms of Aegina weigh about 202 grs. If gold : silver = 15 : 1, the ox-unit (Homeric *talanton* and Mycenaean ring standard) of about 135 grs. = ten silver pieces of 202 grs. If the gold unit = 130 grs., it would = ten silver pieces of 195 grs. each, the normal weight of Aeginetic didrachms in the sixth century B.C. This didrachm contained two drachms of 98 grs., and 12 obols of about 16 grs. each. The terms *drachm* and *obol* are due to the old barter system, when small bronze rods (*δβολός*) passed as money (cf. iron money of Sparta and Byzantium). Six of these made a *handful* (*δραχμή*). The bronze rod and the handful were replaced by the silver *obol* and silver *drachm*.

586. By the beginning of the fifth century B.C. almost every important State in Greece, as well as the Greek towns in Italy and Sicily, were issuing silver coins impressed with a distinctive badge, whilst by the middle of the fourth century bronze coins similarly stamped were practically universal. Solon struck the first silver at Athens, making his drachm equal to a sheep, a goat, or a medimnus of corn, the old barter units used as sub-multiples of the cow. The chief types are: Athens (head of Athena; reverse, owl) (Fig. 105), Corinth

Coin types
in silver.



Fig. 105. Tetradrachm of Athens.

(Pegasus, head of Athena on staters, head of Aphrodite on drachms), Argos (wolf, forepart of wolf, wolf's head), Sicyon (chimaera, dove), Arcadia (Zeus), Mantinea (bear), Elis (head of Zeus, head of Hera, eagle with prey, thunderbolt). Phocis, Boeotia, and Thessaly issued federal coinages: Phocis (bull's head facing), Boeotia (Boeotian shield) (Fig. 106), Thessaly



Fig. 106. Coin of Boeotia (shield and mill sail incuse).

(horse, youth struggling with bull), Euboea (nymph, cow's head) (Fig. 107). Other types are Eretria (Gorgon-head, bull's head), Carystus (cow suckling



Fig. 107. Coin of Euboea.

calf, bull lying down, cock), Histiaea (vine, bull, head of Maenad), Corcyra (cow suckling calf), Opuntian Locrians (Ajax Oileus), Ozolian Locrians (evening star), Tarentum (Taras on dolphin, horseman), Croton



Fig. 108. Coin of Croton.

(tripod, cuttle-fish) (Fig. 108), Sybaris (bull), Thurii (bull) (Fig. 109),



Fig. 109. Coin of Thurii.



Fig. 110. Coin of Metapontum.

Metapontum (ear of corn) (Fig. 110), Poseidonia (Poseidon), Rhegium and

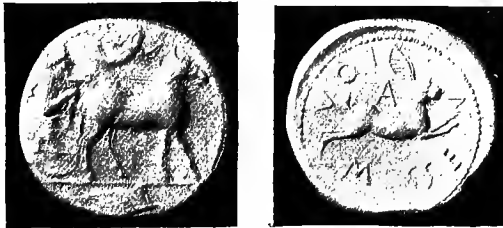


Fig. 111. Coin of Messana.

Messana (mule-car, hare) (Fig. 111), Syracuse (quadriga, biga, celes, head of local deity (so-called Arethusa), head of nymph Arethusa, cuttle fish,

dolphin), Leontini (lion's head), Gela (forepart of man-headed bull), Agrigentum (eagle, crab), Selinus (leaf of *selinon*, wild parsley), Segesta (dog),



Fig. 112. Coin of Cyrene.

Cyrene (Zeus Ammon, silphium plant) (Fig. 112), Rhoda (nymph, inverted rose) (Fig. 113), Rhodes (rose), Melos (apple, *μηλον*).

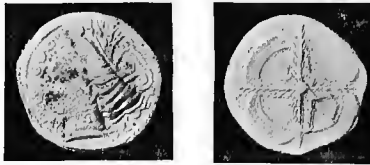


Fig. 113. Coin of Rhoda in Spain.

587. As kings placed their signets on their coins, so states put on their mintage distinctive badges, often those cut on the public seal, *e.g.* the Ozolian Locri (called *ἑσπέριοι*), whose public seal bore the star of Hesper (Strabo 418), put a star on their coins. But these state badges were adopted for various reasons and often alluded to the principal product of the place, used in barter before or even after the invention of coinage. To such Aristotle refers when he says that the type on the coin is a mark of value. Hence the constant occurrence of the cow, *e.g.* on the coins of Croesus along with the lion (the royal signet), in Samos, Calchedon, Byzantium, Euboea, Thessaly, etc.; the tunny at Cyzicus and Gades, where that fish was the chief staple, and where accounts were probably kept in fish, as in modern Iceland. At Olbia coins in shape of a tunny were used (Fig. 114); the

Origin of
coin types.



Fig. 114. Coins of Olbia, in the form of tunny fish.

oyster (Grynium), the silphium (Cyrene), the wheat ear (Metapontum); other instances of natural productions or manufactures are the tortoise

(Aegina), shield (Boeotia), axe (Tenedos) (Fig. 115), sheep (Salamis in Cyprus and various towns in Palestine) (Fig. 116). As such natural and



Fig. 115. Coin of Tenedos.

Fig. 116. Coin of Salamis in Cyprus.

manufactured products served as sub-multiples of the cow before coinage began, and as the gold unit was based on the cow, thus silver units at various places were adjusted to local sub-units; thus Solon (Plut. *Sol.* 15) adjusted his drachm to the πρόβατον and μέδιμνος. The Olbian coins in shape of a tunny show the influence of barter units; so in modern times barbarians, when they begin to use silver, make it in form of old barter units—fish-hooks, shells, etc.

Other types are merely punning allusions to the names of the towns of issue, e.g. the seal (φώκη), apple (μῆλον), bee (μέλιττα), rose (ρόδον), lion's head, selinon leaf, sickle (δρέπανον) on the coins of Phocaea, Melos, Melitaea, Rhodes, Rhoda, Leontini, Selinus, Zancle, etc. Other types allude to local cults, myths, famous men, etc. After Alexander kings began to place their own portraits on their coins.

Gold was not coined in Greece or Italy till the end of the fifth century, when Thasos, Athens, Rhodes, Syracuse, Tarentum, etc., and finally Philip II and Alexander struck gold. The gold unit never varied, though the silver fluctuated constantly, due to an endless effort after bimetallism.

588. TABLE OF ATTIC COINS.

	Troy.		Troy.
	grs.		grs.
Dekadrachmon = 10 dr. = 675		Trihemibolion = 1½ ob. = 16·87	
Tetradrachmon = 4 „ = 270	„	Obolos = 1 „ = 11·25	„
Didrachmon = 2 „ = 135	„	Tritemorion = ¾ „ = 8·45	„
Drachme = 1 „ = 67·5	„	Hemibolion = ½ „ = 5·62	„
Pentobolon = 5 ob. = 56·25	„	Trihemitartemorion = ¾ „ = 4·2	„
Tetrobolon = 4 „ = 45	„	Tetartemorion = ¼ „ = 2·8	„
Triobolon = ½ dr. = 3 „ = 33·75	„	Hemitartemorion = ⅛ „ = 1·4	„
Diobolon = 2 „ = 22·5	„		

Bibliography. Ridgeway, *Origin of Metallic Currency*; *Handbook of Greek and Roman Coins*; British Museum *Catalogues of Greek Coins*; B. V. Head, *Historia Numorum*.

VI. 10. WAR.

A. ARMS AND ARMOUR.

589. FROM the earliest times of which we have any knowledge the most important part in Hellenic warfare was played by the Hoplite. His equipment varied but little between the days when the Homeric poems were written and the days when Greece fell before the power of Rome. It consisted of helm, cuirass, greaves and shield, with spear and sword as offensive arms. The helm (κόρυς or κυνέη) was normally of bronze, though occasionally of leather. Its character varied somewhat at different epochs but we can distinguish three main forms. (1) The Corinthian helm when drawn down covered the whole head as far as the chin, and only showed the wearer's eyes through two eye-slits: it could however be worn tilted backwards when an engagement was not in progress, and then exposed the whole face. This form of headpiece was often destitute of crest or plume. (2) The Athenian helm was of a more open type: it left the face visible, though the cheeks were sometimes protected by moveable plates which could be turned up or down. It was usually furnished with a crest, consisting of a metal ridge in which was set a tall ornament of leather, horsehair, or feathers. The crest was occasionally triple, consisting of a larger decoration in the middle and two smaller ones on each side. (3) A simpler form of headpiece was a plain pointed steel cap (πίλος) without any vizor, cheek-piece, or crest: it seems to have been specially common among the Spartans. We have no space for the description of the many minor varieties of helm. The cuirass (θώραξ) generally consisted of a breast-plate and back-plate of bronze, joined by thongs or by straps fastened by a buckle. The earliest form of body-armour was short, and only reached down to the hip-bone: to supplement it the warrior wore the *μίτρα*, a broad girdle of leather and bronze, which covered the stomach and hips, and was girt on before the cuirass was donned. From the fifth century onward the shape of the breast-plate and back-plate was improved, so that they came down lower and more adequately protected the lower parts of the body. For the *μίτρα* was substituted a single or double fringe of leather strips, strengthened with metal studs or edging, called *πτέρυγες*, which hung down half-way to the knees. Warriors whose means were narrow often substituted for the cuirass a tight-fitting jerkin of leather (*σπολάς*) more or less strengthened

with metal in its more important parts. We also hear occasionally of body-armour composed of linen quilted, or stuffed with felt. The greaves (*κνημίδες*) were thin pliable plates of bronze adapted to the shape of the leg: they opened at the back, and when slipped on were fastened below the knee and above the ankle with thongs or straps. In arming himself the warrior first assumed his greaves, then his cuirass, and lastly his helm.



Fig. 117. Hoplite with Corinthian helmet, and Boeotian shield.
Bronze statuette.

The hoplite's shield (*ἀσπίς*) was round or oval, and varied from three to five feet in length. It was composed of several thicknesses of leather, and had a metal rim and boss. In Shield. early days it was managed by means of a single strap grasped by the left-hand (*πόρπαξ*) and of a broad belt passed round the left shoulder (*τελαμών*), so as to throw much of the weight on the body and thus relieve the arm. In later days shields were generally somewhat smaller, and were managed

by two handles (*ᾠχάνα*) instead of a belt and a strap, the left hand being thrust through the first so as to grip the second. Only the Macedonian phalangite, requiring both hands to manage his long pike, was compelled to hang his shield on his left arm by a single handle through which passed hand, wrist and forearm. The custom of painting devices upon the shield seems to have prevailed from the earliest times: in the fifth and fourth cen-

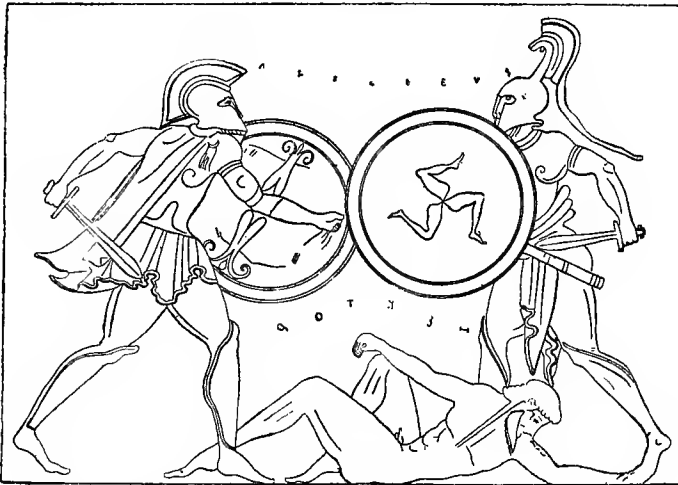


Fig. 118. Combatant warriors, from a fifth century vase.

uries the hoplite bore not his own personal cognisance but one chosen by the state, either the initial letter of its name or its regular badge. Thus the Sicyonian shield was blazoned with a large Σ , and the Theban with a club: the shield of the Macedonian infantry was painted in a peculiar concentric pattern of crescents and stars which is easily recognizable on coins and monuments.

590. The hoplite's lance (*δόνον*) was a stout weapon about six feet long, employed mainly for thrusting: in the Homeric poems the heroes are often introduced casting their lances as missiles, but this practice was rare in historical times, when the weapon was generally used only as a pike for close combat. Very different from the normal Greek lance was the *σάρισσα* of the Macedonian phalangite, an enormous spear of eighteen feet in length, requiring both hands for its management. Owing to their vast size the heads of five sarissae projected beyond the front line of the phalanx, which seemed utterly impenetrable to the enemy as long as its order remained unbroken. The Greek sword (*ξίφος*) was a comparatively short and ineffective

Lance and sword.

weapon compared to the Roman *gladius*. It seldom exceeded 25 inches in length, and very often fell short of 20 inches. It was straight, acutely pointed, and double-edged for both cut and thrust work. The guard or cross-piece was small, in some of the ancient types almost non-existent. Occasionally a short curved sabre (*μάχαιρα, κοπίς, δρέπανον*), only fitted for hewing and not for thrusting, was used, but it was much less common than the straight sword. Spear and sword were the hoplite's only weapons: the axe, mace and halberd were essentially foreign weapons and never became naturalized among the Greeks.

591. The Greek horseman bore the same arms as the hoplite save that he very often dispensed with the use of a shield, needing his left hand for the reins. When the shield was carried it was round, and somewhat smaller than that of the foot-soldier. The lance was naturally used much more than the sword by cavalry: the latter weapon was too short for efficient employment on horseback. The lance was used both over-hand and under-hand, and was occasionally thrown as a missile. It was not a long weapon needing to be placed 'in rest' under the arm like that of the mediaeval knight. The only trace of the use of a lance of considerable length is found in the army of Alexander the Great, where there were certain 'σαρισσοφόροι ἵππεις.' The horseman had neither stirrups nor saddle, sitting on a mere *ἐπίππιον* of felt or skin, fastened round the horse's belly by a strap. The inefficiency of Greek horse is largely to be accounted for by their want of a sufficiently long lance, and by the fact that the shock of the individual rider was lessened owing to his being destitute of stirrups or saddle. His thrust was delivered with the force of his own arm alone, not with that of man and horse together, and was therefore less than that of a rider sitting tight in his saddle with his lance in rest. If a Greek horseman, depending on his balance and the grip of his knees alone, had delivered a charge with the same impetus as a mediaeval knight, he would have been carried backwards over his horse's tail when his lance struck his adversary. From the fifth century onwards the Greeks were acquainted with the use of light horse, destitute of armour and using the missile dart (*ἀκόντιον*) as their chief weapon. They seem to have been developed on the plains of Apulia and Sicily, being first heard of in the army of the Syracusan tyrant Gelon. The Tarentines were most noted for their strength in this arm, and from the fourth century mounted javelin-men were often called 'Tarentines,' whatever their nationality¹. Horse-bowmen on the other hand were of distinctly barbarian origin, and only prominent in the armies of Alexander the Great and his successors.

¹ They are first mentioned in 316 B.C., but the Tarentine coins contain an admirable set of representations of them, armed with a large round shield and three darts, from about 420 onwards. These troops sometimes were furnished with two horses, and leapt from one to the other.

592. The arms of light infantry were the dart, bow and sling. They wore no metal armour, being at the most protected by leather or quilted jerkins, and wearing (in Northern Greece at least) a broad felt hat (*πέτασος*). The javelin-man (*ἀκοντιστής*) carried a small bundle of his weapons and a light shield: the darts (*ἀκόντιον*) were light and ranged from three to five feet in length. The bow (*τόξον*) was very short, sometimes not more than half the length of the English six-foot weapon of the Middle Ages. It was made generally of an elastic wood, but sometimes of two pieces of horn soldered into a central handle. Greek archery seems never to have been very good or efficient: such as it was, it flourished most in Crete. Its poorness is best shown by the fact that those two very inferior weapons the dart and the sling continued to exist alongside of the bow to the very last days of Greek history. Really competent archery drives slingers and javelin-men out of the field. The most famous employers of the sling (*σφενδόνη*) were the Rhodians and Cretans, with some of the peoples of Northern Greece. Their most common missile was an almond-shaped lump of lead, but pebbles and even clay-balls were used in default of a proper provision of metal.

Light
infantry.

B. TACTICS.

593. The descriptions of battles in the Homeric poems must not be taken as accurately reproducing any real stage of the Art of War, either in the Heroic age or in the time when the poems were composed. Objectless single combats in front of the line, and protracted scuffles over the corpses of fallen heroes can never have constituted the main part of an engagement. An army, whose solid portion consisted of warriors heavily armed with helm, cuirass and shield, must fight in more or less orderly array. The best description of a hoplite force in Homer is that in *Iliad* XVI. 210—216, where the battle-line of the Myrmidons is compared to a wall reared by a skilful builder, shield touching shield all down the front. The exigencies of poetry cause the narrative to neglect the main heart of the fight in order to describe the *ἀριστεία* of chiefs. There is no reason to doubt that at an early stage of Greek warfare the chariot was used in battle, as we see it employed in Egyptian or Assyrian monuments. Corroboration of the native tradition on the subject is supplied by representations of war-chariots in Mycenaean art. But in the prehistoric days when they were employed by the chiefs, the main mass of the host must still have consisted of half-armed and untrained retainers, not of the hoplites described in the *Iliad*. The poet in short was mixing the half-remembered tactics of antiquity with those of his own day.

Homeric
warfare.

594. Aristotle (*Politics* VI. (IV.), 13) is probably right in stating that in the normal Hellenic state there was a time when the main fighting force consisted of a cavalry furnished by the nobles. Traces of the long lost predominance of the mounted chief

Predomin-
ance of
cavalry.

are to be found in the existence of a class known as *ἰππεῖς* in states which in historic days no longer employed cavalry. Athens had no organized force of the kind till the middle of the fifth century, but the 'knights' occur in the legislation of Draco and Solon. At Sparta the 300 who bore the name always served on foot as the body-guard of the kings. In the Greece of the fifth century the only region where the knightly class still retained its ancient preponderance both in politics and on the battle-field was Thessaly, where a cavalry composed of nobles was the ruling power, and the hoplite was only of secondary importance. In Boeotia, the only other land whose mounted force was in all ages very important, the heavy infantry was in historic times the main battle-force.

595. The day of the preponderance of cavalry came to an end when it was discovered that a solid body of mailed hoplites, standing shield to shield, without flinching, could turn back a charge of horse. Except in flat regions like Thessaly and Boeotia, the mounted arm disappeared for a space from the battle-field. The tactics of the hoplite-array which thus superseded the knighthood were very simple. Drawn up in lines generally about eight deep, the troops advanced with level front against their adversaries and tried to bear them down by the heaviness of their impact. The charge of the hoplite-array being the decisive point in a battle, the all-important aim was to keep the line unbroken, as its strength lay in its continuity, and gaps were fatal. The two things to be feared were that the line might be broken, or that it might be outflanked. The latter disaster had a tendency to happen upon the left wing of an army, for (as Thucydides remarks in describing the battle of Mantinea) the extreme right-hand man of every host was apt to edge away to the right, in order to avoid exposing his unshielded right side to the enemy. His comrades instinctively followed his example all down the line, each striving to get close under his right-hand neighbour's shield. Thus the extreme left-hand end of the line was drawn out of its original place as the advance continued, and if two arrays of exactly equal strength started precisely opposite to each other at a mile apart, it was found that each, at the moment of contact, would be slightly outflanking its enemy on the right and slightly outflanked by him on the left wing. It was of course unlikely that two armies would be precisely equal and show an identical length of front: where they did not, the host whose superior numbers enabled it to outflank the other had the better chance of victory. Hence came a tendency on the part of armies numerically inferior to their foes to choose for battle a position where there was some natural obstacle, covering one or both flanks, and preventing the enemy from turning the wings. In Greece, a land of passes and ravines, such positions abounded: the ideal one for a small force was a defile like that of Thermopylae, where it could draw itself up with both flanks safely protected, and so prevent the superior numbers of the enemy from telling.

Hoplite
tactics.

596. Competent generals, though placing their main reliance on their hoplites, took bowmen, slingers and javelin-men into the field, because they knew that their adversaries would also be furnished with such troops, who would be able to annoy the hoplites from a distance, unless kept in check by bands armed like themselves. These formed a subsidiary force, 'furtive hoverers on the edge of battle,' as one ancient writer calls them. It is significant that in many engagements, where large numbers of light-armed troops were present (as at Plataea and Delium), there is little or no mention of their doings during the fight. The best-known instance of a victory won by light troops over hoplites in the fifth century took place in 426, when the Athenian general Demosthenes was routed by the Aetolians. Having advanced without any sufficient provision of archers or peltasts into a rugged region, his men were continually harassed from a distance by the evasive foe, till after severe losses they grew demoralized, turned, and fled for the coast. Hotly pursued by their nimble adversaries they only escaped with the loss of half their numbers. Battle-tactics remained almost unchanged down to the fourth century. The hoplites stood in the centre in a continuous line: the cavalry (if any was present) was drawn up on one or both flanks, while the light troops made play in front till the lines closed, and then drew aside. Ambushes were occasionally set, from which select detachments ran in on to the flank or rear of the enemy, *e.g.* by Demosthenes at the battle of Olpae in 426. There are few traces, if any, of some of the commonest military practices, such as the retention of a reserve, or the drawing up of a second line to support the first, or the 'refusing' of part of the battle-line by placing it where it could not be easily reached by the enemy. The last-named device was impossible so long as generals sacrificed all other advantages to the necessity of keeping a level front all down the line, and throwing in all their troops simultaneously. It often occurred, of course, that the fight did not open at the same moment on all parts of the field, (*e.g.* at Plataea and Delium), but this was the result of accident, not of design.

597. The late development of tactics among the Greeks is all the more curious because professional soldiers were known from a very early age. The Spartans most certainly deserve that name, and it is equally applicable to the mercenaries, who are found serving in great numbers as early as the seventh and sixth centuries. But the Spartans seem to have excelled mainly in the handiness under arms which comes from perpetual drill, and in the power to make rapid and orderly movement which results from subdivision into small tactical units. Their array was stereotyped, and new military devices were not to be expected from such a conservative race. Their mobility came from the fact that they had a complete system of field officers and subalterns, forming a hierarchy down which orders were easily and rapidly passed. In an ordinary Greek state the host was divided only by 'tribes'

Use of light-armed troops.

Drill and organisation of the Spartans.

or suchlike large divisions, and the command was passed down the line by the shouts of the general's herald. Among the Spartans on the other hand the smallest unit, the *Enomotia*, was only some 32 or 36 strong: four of them made a *Pentekostys*, and four *Pentekostyes* made a *λόχος* of some 500 spears. Each of these bodies had its officer (*ἐνωμοστάρχης*, *λοχαγός*, etc.), responsible to his superior till the Polemarch or King was reached at the top of the ascending scale of responsibility. It is curious to find that not even a Spartan training could secure complete discipline in the field: the first battle of Mantinea (418) was almost lost by gross disobedience on the part of two officers, who neglected to move up to the left at the king's orders.

598. The origin of mercenary troops in Greece is lost in the mists of extreme antiquity. In the Homeric poems exiles and adventurers are often found hiring themselves out to serve as the Mercenaries. henchmen of warlike princes. In a later age a large band of foreign spearmen was part of the necessary equipment of a tyrant. Princes like Periander and Polycrates hired hundreds of such retainers, while the great Syracusan tyrants of the early fifth century counted their mercenaries by the ten thousand. The more adventurous of the Hellenic soldiers of fortune went to the East or Egypt; King Apries and King Amasis in the last-named country are said to have maintained no less than 30,000 Ionian and Carian troops. Nor did the Persian Satraps disdain in a later age to strengthen their disorderly hordes by a solid core of Greek hoplites. By the fourth century we find permanent bands of mercenaries led by noted *condottieri*, *ξαναγοί*, wandering from land to land in search of employment. The Athenians of Demosthenes' day suffered much trouble from their inveterate habit of employing these hirelings, instead of calling out their citizen levy. The mercenary chiefs, to whom they entrusted the conduct of their campaigns, preferred (as was natural) their private interests to those of their employers. They were always set on plunder rather than on fighting, and often committed deeds of actual treachery. Aristotle remarks that the mercenary kept his head better in situations of ordinary danger, but that he was quite incapable of the occasional acts of desperate devotion which were not infrequently to be found among citizen troops fighting for their own hearths and homes.

599. The fourth century saw a profound modification of the methods of war, connected with the names of Iphicrates, Epameinondas, and the two great Macedonian kings Philip and Alexander. Developments in the fourth century. The first-named officer somewhat improved the reputation of light troops by organizing a corps of peltasts who bore light body-armor of quilted linen, and carried not only darts but also a spear and sword for close combat, so that they were able on occasion to join in hand-to-hand fighting. His great achievement however, the destruction of a Spartan *mora* near Corinth in 391, was accomplished not by bidding his men close, but by pursuing the same

harassing tactics by which the Aetolians had routed Demosthenes in 426. The name of Epameinondas marks a much more important landmark in military history. The chief device which he invented was that of strengthening one wing for offensive purposes and 'refusing' the rest of his battle-line till the strong wing had already made a breach in the enemy's array and shaken his confidence. At Leuctra (371) he destined his left wing for the offensive, contrary to the ordinary Greek custom which placed the best troops on the right, the post of honour. Here he massed the Theban contingent in a solid column fifty deep, while his centre and right were composed of the other Boeotian levies drawn up in the usual line-formation. The Peloponnesians faced him in a continuous array twelve deep, the Spartans taking the right as was their wont. Epameinondas hurled the Theban column at the Lacedaemonians, while bidding the other Boeotians hang back and refrain from closing. In spite of the desperate resistance of king Cleombrotus and his men, the column broke right through them and split the Peloponnesian host in two. The allies who formed the left and centre of Cleombrotus' army would not stand firm when they saw their masters beaten and the king slain: almost before the Boeotians had come into contact with them they gave ground and retreated in good order to their camp. This is the first example of a deliberate advance *en échelon* in Greek military history. At Mantinea (362 B.C.) Epameinondas adopted the same order of battle (Fig. 119): he massed his Boeotian troops in a deep column on the left, flanking them with the best part of his cavalry, in order to prevent their being charged by the horsemen of the hostile right wing. His Arcadian, Argive and Messenian contingents on his centre and right were destined only to hold the enemy employed, while the Boeotians dealt the decisive blow. A detached body, mainly composed of light troops, was thrown out far to the right, to threaten the hostile left, and prevent it from delivering a counter-stroke. When the lines closed the result was much the same as at Leuctra, but the Spartans on the right wing of their host strove so desperately to hold their ground that Epameinondas had himself to lead the 'sacred band' to the head of his column to strike the final blow. He broke the hostile line and won the fight, but was slain in the moment of victory.

600. We are unfortunately very ill-informed as to the details of the battles of Philip of Macedon: we know enough however to be able to conclude that he owed his success to two main devices. He used his cavalry far more than any general before him, and he trained his infantry to work in very close and solid columns and to use far longer weapons than their enemies, so that they bore them down by sheer force of impact. His celebrated phalanx was armed with spears more than twice the length of those of the previous generation: when the pikes were brought down to the charge, those of the second, third, fourth, and fifth ranks all projected in front of the men in the front line, so the thicket of shafts was so close as to

Tactics of
Philip.

seem absolutely impenetrable. The Greek hoplites with their six-foot spears could never stand against the five rows of eighteen-foot sarissae

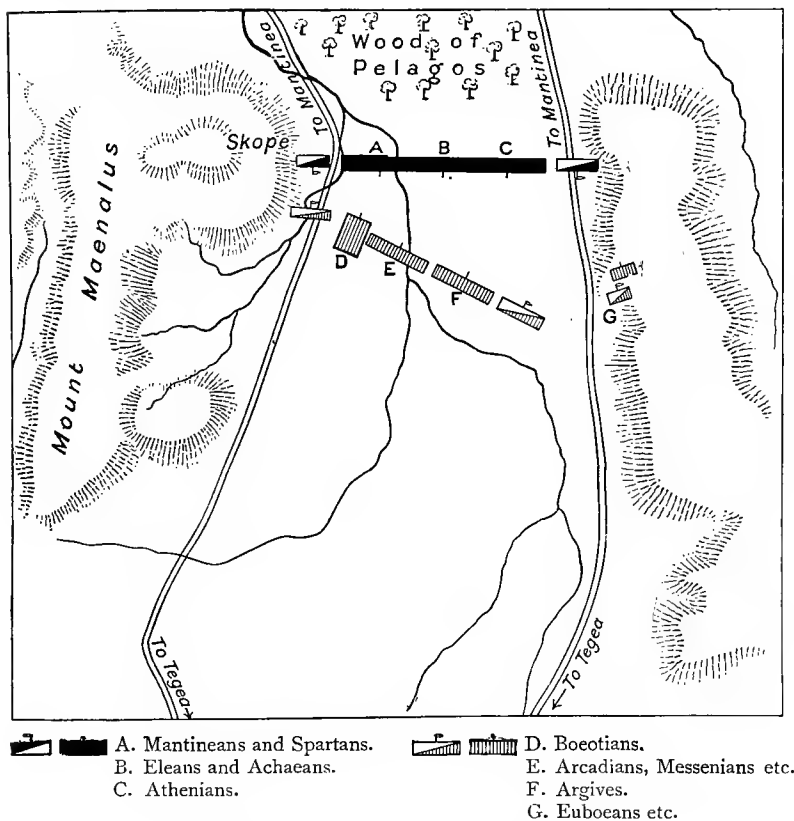


Fig. 119. Battle of Mantinea (362 B.C.).

projecting in front of the Macedonian phalanx. The core of Philip's infantry was composed of the six *τάξεις* of native Macedonian foot armed with the sarissa, but he also employed many mercenaries equipped in the ordinary Greek fashion, as well as a large corps of *ὑπασπισται*, whose main duty was to cover the flanks of the phalanx. They were a light form of infantry of the line, bearing shield and pike, but wearing only a broad felt hat instead of a helmet, and a linen or quilted jerkin instead

of a cuirass. It was however by means of their cavalry, even more than by the sarissae of their phalanx, that Philip and Alexander won their victories. The native Macedonian horse was itself numerous, and to this after 344 Philip added the Thessalian cavalry, the most formidable body of the kind in Greece. It seems probable that the good service which he got out of an arm hitherto somewhat ineffective in Hellenic warfare was the result partly of using horsemen in larger bodies than had ever been seen before, partly of training the men to charge home in close order instead of endeavouring to perform feats of individual prowess. Perhaps he may have given them a longer lance than they before possessed, but this is uncertain. It is at any rate clear that Philip used his cavalry in masses for delivering flank attacks on the hostile line, while the phalanx assaulted it in front. We should gather that he was the first who relied upon it for striking the decisive blow in battle: Epameinondas seems only to have used it to drive the enemy's horse away and to cover the flanks of the hoplites. It would appear that in the armies of Philip and his greater son the cavalry generally formed a sixth or a seventh of the whole force, whereas in earlier days they seldom rose to a tenth or a twelfth.

601. The details of the battles of Alexander the Great are far better known to us than those of his father's victories. Alike at

Battles of
Alexander.

the Granicus, at Issus and at Arbela he concentrated his best cavalry on the right wing, which he headed in person, and with it delivered the decisive attack. The phalanx in the centre kept the enemy at bay with its long spears, while the left wing, composed of the Thessalian and mercenary cavalry, covered the flank of the infantry and maintained a 'defensive-offensive' attitude. At the Granicus, where the enemy was not possessed of any crushing numerical superiority, and at Issus, where the Persians threw away their advantage by cramping their host into the short two-mile front between the hills and the sea, Alexander's plan succeeded without much difficulty. But at Arbela (Fig. 120), where he was enormously outflanked on both wings on a treeless plain, he had to take special precautions. Preserving the general character of his array, he told off a considerable body of men to form flank and rear guards, in case the enemy might swing round his wings and try to attack him from the side. Thus he advanced with the army formed in a sort of hollow square, of which the front was solid, and destined for offensive work, while the sides and rear were weak, and intended only to hold off the enemy till the main line should have done its work. The outflanking movement, which Alexander had feared, actually took place and caused some confusion: moreover a body of Indian cavalry which slipped in between two of the brigades of the phalanx also did mischief. Nevertheless the attack of Alexander's right wing was so decisive that the Persian King saw his centre pierced and turned to fly. When he had departed his

whole army, even those parts of it which had not been unsuccessful, melted from the field. Alexander may be styled pre-eminently a cavalry general. It was always with his horse-guards (*ἀγῆμα*), followed by the other squadrons of the native Macedonian horse, that he delivered the decisive blow. But he also knew thoroughly well how to handle his infantry, especially the 'Hypaspistae' and other light troops, and in mountain campaigns, where cavalry could not be employed, showed

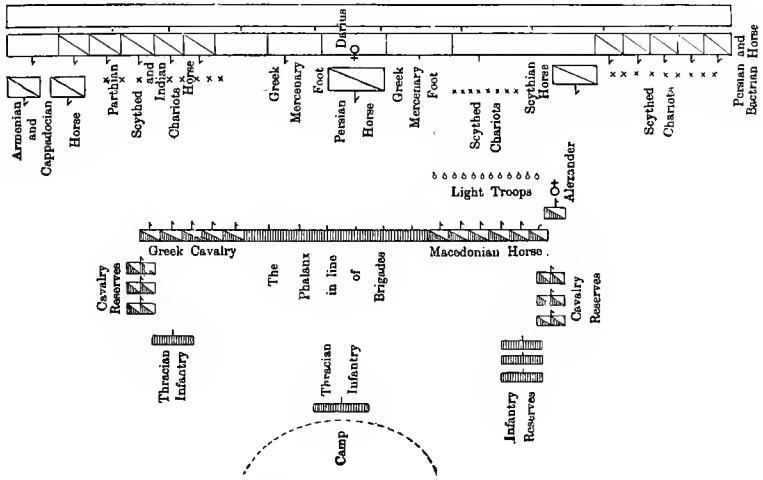


Fig. 120. Battle of Arbela.

himself as brilliant a commander as at the Granicus or Arbela. In his last days he set on foot an experiment which was destined never to be carried into effect; he began to reorganize the phalanx, and to incorporate in it numbers of Asiatic archers and other light troops, who were to form its rear ranks, while the Macedonians bearing the long sarissa were to stand only four deep in front of them. Apparently the orientals were to sally out on the flanks, to cast their missiles, and then to take refuge behind the Macedonians when the enemy proceeded to charge, just as the arquebusiers of the sixteenth and seventeenth centuries were wont to take shelter behind their pikemen.

502. Alexander's successors led armies far inferior in military value to that of their great master: the contending generals after his death enlisted orientals in great hordes, sometimes allowing them to keep their own weapons, sometimes giving

Successors of Alexander.

them the Macedonian equipment of sarissa and shield. They fought with unwieldy masses of inferior troops rather than with the small but highly trained army which Alexander had used at Issus or Arbela. Their tendency to sacrifice quality to dead weight of numbers is well shown by the fact that they doubled the depth of the phalanx, thus making it a much more unwieldy weapon to handle. For some time after Alexander's death the normal battle consisted of an attempt by each side to break through or turn one of the hostile wings by furious cavalry charges, and then to roll up the infantry centre by attacks from the flank. In response the phalanx was made denser in order to be able to beat off all cavalry attacks by mere solidity. Under Philip and Alexander it had still some mobility, and its various *τάξεις* could act independently of each other and execute individual movements. But in the third century it became a single clump of spears of most unwieldy size, which could well maintain a passive defensive, but for offensive purposes could only move straight forward in a slow and lumbering fashion. Pyrrhus seems to have been the only general among the Epigoni who tried to keep the phalanx mobile: in his Roman wars we read that he drew it up in a row of small columns, not in one mass, placing bodies of Italian troops, armed in their native manner, between each of its brigades. After two victories he failed to wear down the Roman legions, whose superiority lay in their flexible array and in the fact that the individual legionary carried both the missile *pilum* and the broadsword instead of the unwieldy sarissa. Where he was beaten it was not likely that kings like Philip V and Perseus, who used the phalanx in its densest form, would succeed. Even more certainly doomed to failure were adversaries of Rome who, like Antiochus III, employed armies marshalled in the Macedonian fashion, but consisting of mere orientals destitute of Macedonian steadiness and obstinacy.

C. FORTIFICATION AND SIEGE-CRAFT.

603. Greece is a land of sharply-cut rocks and ravines, where fortification was easy and attack difficult. There are many isolated and precipitous hills, on which strongholds of a formidable kind might easily be constructed by building rude walls of unhewn stone, along the fronts most accessible from below. Hence the early type of fortress in Greece was a rocky citadel, like the Acropolis of Athens or of Corinth. Where a position entirely cut off from neighbouring high ground could not be found, the culminating point of a ridge or the end of a spur would be chosen, and only the 'saddle,' where the stronghold joined the rest of the high ground, would require elaborate fortification. Only a few places, such as Thebes, lay on the plain and required a firm and complete ring wall to form their primitive citadel. There is no reason to doubt the extreme antiquity of many of the Hellenic fortresses, of which Mycenæ

Primitive
citadels.

and Tiryns may serve as types. In them we find a hill crowned by a plateau, surrounded by a strong wall of large irregular blocks carefully fitted in with smaller stones. At the points most open to attack it was built of enormous thickness, and sometimes swells out into large bastion-like projections, some of which are hollow and contain casemates. Not infrequently the rock was scarped down outside the walls to make it more precipitous. There was only one gate, the approach to which was so contrived as to expose the assailants to the fire of missiles from the wall: and as it turned in to the right, anyone drawing near was compelled to present his unshielded side to the besieged.

604. As towns grew in size an unfortified lower city often grew up at the foot of the Acropolis. In case of invasion this would be abandoned to the enemy; but the citadels, which offered a refuge to all the citizens, were practically impregnable, if proper watch against escalade were kept at the accessible points. Year-long blockade, which a citizen army has rarely patience or leisure to undertake, or treachery from within, could alone subdue them. When Greek colonisation spread to East and West, a favourite desire of the colonists was to seize a headland and fortify the neck by which it was joined to the mainland. The island city of Ortygia at Syracuse and the old town of Tarentum are examples of such strongholds. Walls round the sea-front were only needed when wars between the Hellenes themselves, in a later generation, exposed the cities to attack from the side of the water. The growth of wealth and population ultimately induced the Greeks to surround their lower-cities with walls, and not to trust merely to the strength of the Acropolis. The sixth century was the great period of such building, and the tyrants were often the undertakers of this serious task. With the attempt to render impregnable localities protected by no natural obstacles, and often situated on perfectly flat ground, scientific fortification began. Walls had now to be built of regular masonry: towers (generally quite small) projected from them at intervals, so as to give a flanking fire on the ground in front of the straight spaces of 'curtain' between them, and to prevent the close approach of the besieger. Where the character of the soil allowed, ditches were often cut round the foot of the walls. Stone was so easily procured in most parts of Greece that good ashlar masonry was generally employed: but where stone was scarce, or the city too poor to pay for it, bricks were sometimes used. Mantinea, it will be remembered, fell in 385 because the Spartans were able to turn the river Ophis against the face of a wall built of nothing more than sun-dried brick, which crumbled and fell when exposed to the moisture. Occasionally a mere ditch and earth-wall, topped by a palisade, was all that a small town could afford.

The fifth century saw the commencement of building on a really ambitious scale. Gelon's great wall round the mainland suburbs of Syracuse, and still more the Themistoclean fortifications of the Peiraeus and of the whole city of Athens were both enormous undertakings. They were

thoroughly successful in their object—no serious attempt was ever made to breach them, and enemies who attacked Syracuse and Athens only tried to work by blockade or by suborning treachery inside the city. The Periclean ‘Long Walls’ from Athens to Phalerum and from Athens to Peiraeus were a further step in advance in the way of fortification: they included such a large extent of ground that the whole population of Attica with their belongings and probably their cattle (so far as it was not sent over to Euboea) could get within them. Syracuse again supplies the best parallel: the tyrant Dionysius by walling round the whole plateau of Epipolae enclosed a vast space, much of which was never covered with houses, and only served as a refuge in time of need for the inhabitants of the whole Syracusan territory. Attacked a dozen times this great entrenched camp (for such in fact it was) never fell by force (though it was often taken by treachery) till the day when it was stormed by the legionaries of Marcellus, nearly two centuries after its construction.

605. As the fifth century saw the development of scientific fortification,

Siege-craft. so also it witnessed the beginnings of scientific siege-craft.

How primitive they were can best be judged by glancing through the numerous sieges detailed by Thucydides. It was still the rarest of events for a city to be taken by other means than starvation or treachery, but we begin to hear both of engineers (like the celebrated Artemon whom Pericles employed at Samos) and of *μηχαναί* or siege-machines. These seem to have been no more than the ram (*ἐμβολή*), the scaling-ladder, mantlets for the protection of men working near the walls, and sometimes no doubt peculiar devices like the great fire-machine with pipe and bellows, by which the Thebans burnt their way into Delium in 424 B.C. The best commentary on the effectiveness of such engines is supplied by the time taken by the Athenians (who passed as being skilled in siege-craft) to reduce Thasos (463), Samos (439) and Potidaea (429). These places, as well as Plataea which was besieged by the Thebans for nearly three years, were all reduced by famine. Thucydides gives a long account of the devices employed against Plataea. The attempts to build a mole overtopping the city wall, to take the city by a general attack with rams, to burn a way in by heaping faggots below the wall, were foiled by the counter-devices of the Plataeans: and the besiegers then built a double wall of circumvallation, strengthened with towers at intervals, round the whole city. After eighteen months they reduced the starving garrison to surrender.

606. Plataea was but a small place, its garrison was too weak to make sorties, and no attempt was made to relieve it from outside.

Siege of Syracuse.

Far other was the case of the Athenians before Syracuse in 414—13: there the besiegers had to deal with a great city containing an army able to meet them in the open field, while they had at their backs many hostile communities which might at any moment endeavour to help the besieged by attacking the beleaguering force in the

rear. We note that the Athenians made no attempt to concentrate their attention on one part of the Syracusan walls for the purpose of breaching or escalading it. They simply sat down to starve out the place, by running lines of circumvallation from sea to sea parallel to the city wall (see Fig. 121)

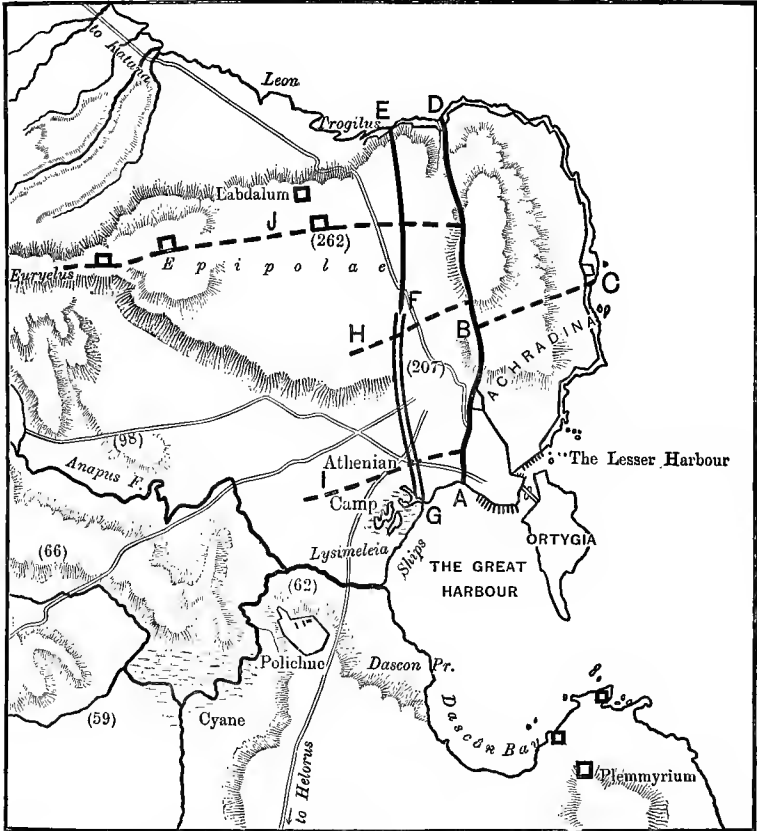


Fig. 121. Plan of Syracuse to illustrate the siege.

The Athenians landed on the north side of Epipolae, stormed the heights by surprise, erected a fort at Labdalum, and set to work to lay out lines across the plateau, on which they established their camp. The first reply of the Syracusans was the building of a counter-wall (*παρτείχισμα*), 'enflading' the direction of the projected Athenian circumvallation: it ran out from Achradina to the middle of Epipolae at right angles to the wall of the former [H]. This counter-wall was stormed by the besiegers,

who thus gained possession of the southern side of the Epipolae plateau. The besieged threw out another counter-wall [I] in the low ground by the harbour, starting from the wall of the lower city. This wall also the Athenians took after a hard-fought action, and now proceeded to build their lines of circumvallation at leisure. The southern section [F, G] was completed with a pair of walls facing inward and outward. The northern portion [E, F] had not even a single wall completed when Gylippus appeared with a relieving army, and as Nicias sent out no 'containing force' he was able to enter Syracuse through the gaps in the Athenian lines. Nicias shirked a general action, which alone might have enabled him to re-occupy the northern part of their lines. Gylippus then stormed the fort at Labdalum, encamped his whole army on the northern side of Epipolae and threw out the third counter-wall [J]. The Athenians allowed it to be completed, and made no attempt to storm it, standing on the defensive in the southern part of their lines. The siege was now practically impossible, since Syracuse had a free access to the open country behind Gylippus's new wall. Nicias would have done well to sail home at once; but he lingered on in his lines, with the disastrous result that we know. It is curious to note how entirely the whole series of operations round Syracuse had turned on the idea that a besieger, to have any chance of success, must necessarily wall in his enemy for the purpose of starving him.

607. The ease and rapidity with which the Carthaginians a few years

The
Carthaginians
and
Dionysius.

later effected the capture of four great cities in Sicily, Selinus, Himera, Agrigentum and Gela, marked a new era in the history of Greek siege-craft. The predominance of the defensive over the offensive, which had prevailed for so long,

seemed shaken by such catastrophes. The Carthaginians' success however was largely due to the reckless expenditure of human life in which their generals were able to indulge. They threw their mercenaries at the walls with a disregard for loss of which no Greek citizen general would have dared to dream. But they prepared the way for the stormers by keeping down the fire of the besieged with thousands of archers and slingers, some of whom they placed on wooden towers erected close to the walls; they attacked many places in the *enceinte* simultaneously with the ram, and they also practised mining at several points. When the walls were shaken, they sent in their hordes with a rush, to attack every weak spot, and even to try intact places with escalade. That great genius Dionysius the elder, on whom the brunt of the Carthaginian attack ultimately fell, showed himself quite able to deal with it. To him is due a great advance in Greek siege-craft both offensive and defensive. He is perhaps best remembered for his invention of the catapult (*καταπέλτης*), which in its original form was a large crossbow for the shooting of heavy bolts, which would pierce shields, mantlets, and palisading, and had a range of at least twice that of the ordinary arrow. By a slight alteration of principle it could also be made

to throw stones or lumps of lead heavy enough to smash battlements or walls that were not too solid. At the siege of the Carthaginian fort of Motye in 397, we find Dionysius overwhelming the besieged by the concentrated fire of his catapults, which he mounted on towers of wood so as to command the walls. His contribution to defensive siege-craft may be gathered from the construction of his great wall round Syracuse, whose projecting point at Euryelus is perhaps the strongest known Hellenic fortification. This angular castle is protected by no less than three ditches, one behind the other; between the second and third is a strong 'horn-work' which has to be stormed before the main fort can be reached. The latter is strengthened with bastion-like towers, and flanked by a high keep commanding the whole structure. In short the system of 'successive interior lines of defence' is scientifically carried out.

608. All through the fourth century the devices of attack and defence were steadily developing, any advance in the destructive power of one being rapidly answered by an improvement in the resisting power of the other. By the time of the Macedonian conquest the siege by blockade had been superseded by the siege with regular approaches, ending in the breaching of the wall by the action of rams, borers (*πρύπανα*) and mines (*δρύγματα*), after the defenders' missile-discharge had been silenced by the use of catapults of all kinds playing either from the trenches or from moveable towers. This method of procedure was often successful against places protected by nothing more than the simple ring-wall. Philip and Alexander both achieved many victories by employing it: some of the sieges which the latter brought to a triumphant end were very notable for the difficulties overcome—and specially those of Tyre and Gaza. In the case of the former the only approach to the island city was along an artificial isthmus, formed by a mole thrown out into the sea. The Tyrians repeatedly stopped the mole and destroyed Alexander's machines and covered ways. It was only when their attention was distracted from the main attack by naval diversions against the sea-wall, that, after seven months, the chief point of assault was breached and stormed.

Philip and
Alexander.

609. But improved methods of attack were always answered by improved methods of defence. By the third century every fortress, except rocky fastnesses like the Corinthian acropolis which could defy all the devices of ancient siege-craft, had to strengthen itself. Ditches were widened and deepened, and out-works (*προτειχίσματα*) erected in front of the *enceinte*, which had to be taken before the main wall could be assailed. They were composed, like the mediaeval 'lists' which served the same end, of banks topped with palisading. Still more effective was the application of the new system of attack to the defensive, *i.e.* the concentration of quantities of catapults against the enemies' machines and covered ways, and the use of counter-mines against his mining. When the besieger had erected wooden towers,

Later de-
velopments.

the besieged shot fire-arrows at them, or slung pots of burning pitch or oil against them. But if the structures were protected (as was commonly the case) with raw hides or iron plates, the best chance of setting them on fire was to make a sortie, and thrust combustibles below and behind them, on their uncovered sides. Another plan was to drive a countermine under the track on which the moveable tower was advancing, and excavate a hole two or three feet underground. When the machine came over this pit-fall it sank in, and became immovable, or better still, upset sideways. The best remembered leaguer of the post-Alexandrine period was that of Rhodes in 305 B.C. by Demetrius the son of King Antigonos, who won from his skill in siege-craft the name of 'Poliorcetes.' All the approved methods of attack were used against the strongly fortified port. The sea-wall was battered by machines mounted on galleys lashed together, and overtopped by towers built on rafts. But the Rhodians beat off the attack and the floating towers were sunk by a storm. The prince then turned against the land-wall, which he battered with numerous catapults, undermined, and finally approached with an enormous 'Helepolis' or moveable tower of the largest size, 150 feet high and garrisoned by 3,400 men. Demetrius twice got up to the foot of the walls and breached them, but the Rhodians sallied forth at the critical moment and burnt his enormous tower. After repeated attempts to storm the breaches had failed, the assailant was compelled to withdraw, after wasting nearly a year on the abortive undertaking. Numberless other sieges could be cited from the times of the Epigoni, but they only illustrate the details of the system of attack and defence which had been already developed in the fourth century. Nor have we space to speak of the progressive improvements of the two sorts of catapult (*καταπάλται δξυβελεῖς* and *καταπάλται πετροβόλοι*), the bolt-shooting and the stone-throwing varieties, of which elaborate accounts are to be found in the surviving works of the engineers Philo and Hero, to which the reader may be referred for further information.

The reader may consult Rustow and Koechly's *Geschichte des griechischen Kriegswesens*, Aarau, 1852; Droysen's *Heerwesen der Griechen*, Freiburg, 1889; Delbrück's *Geschichte der Kriegskunst*, 1. Berlin, 1900; and Kromayer's *Antike Schlachtfelder in Griechenland*, 1. 1903.

VI. 11. SHIPS.

610. As early as the third millennium B.C., crescent-shaped ships with high prow and stern were common in the Aegean. The prow sometimes resembled an open beak, the stern forming a bifurcate tail. The single mast was supported by forestays and backstays. Ships were also equipped with oars and steering-paddles. Our knowledge of them is derived from Cretan seal-stones, etc. (Fig. 122).

Prehomericships.



Fig. 122. Ships on early Cretan seal-stones.

Smaller craft too were used. In a grave at Palaikastro in eastern Crete dating from the 'Early Minoan' (circ. 3400—2200 B.C.) or 'Middle Minoan' (circ. 2200—1580 B.C.) period there was found a small-sized clay model of a flat-bottomed boat with a raised prow and the remains of two

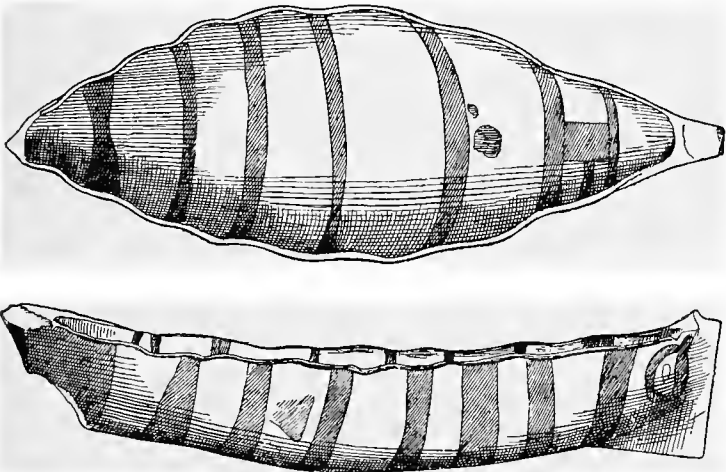


Fig. 123. Terracotta boat (coracle?) from Phylakopi. (From *Excavations at Phylakopi in Melos*, London, 1904, p. 206, fig. 180.)

thwarts. During the 'Late Minoan' (*circ.* 1580—1200 B.C.) and sub-'Minoan' periods similar vessels were in use. The mast was stepped into a four-sided mast-box amidships, and could apparently be lowered into a large rowlock at the stern. There was a small decking aft for the steersman. The oars were attached to the gunwale by leather loops or bights; and at either end of the ship were hawse-holes for cables. These details we gather from models found in Cypriote tombs. The legend that Cinyras, king of Cyprus, promised a fleet to Menelaus, but sent clay boats with clay crews, is recalled by the fact that small terracotta ships and boats are frequent in the graves of Amathus. A terracotta boat from Phylakopi in Melos (Fig. 123) is of special interest. It is painted inside and outside with vertical black bands probably meant for wooden ribs. Its gunwale forms a series of short curves, perhaps to denote the sagging of hides stretched over the ribs (cp. Verg. *Aen.* 6. 413 f. *cumba | sutilis*, Plin. *nat. hist.* 24. 65 *sutiles naves*, Strab. 308 *ῥαπτοῖς πλοίοις*). It has also a painted eye on either side of the prow.

611. The Homeric poems are our main source of information about early Greek shipping. According to them ship-timber (*δῶρον νήιον*) included oak, pine, fir, alder, poplar and white poplar. Homeric ships. Masts and oars were usually of fir. The woodwork of the hull was erected on shipbuilders' stocks (*δρῦοχοί*), and held together by pegs or trenails (*γόμφοι*) and dowel joints (*ἀρμονίαι*). The keel (*τρόπις*) thus laid down curved up fore and aft, so that ships were crescent-shaped (*ὀρθόκραμαι, κορωνίδες*). No mention is made of a separate stern-post, and the cut-water (*στείρη*) may have been merely the forepart of the keel. Ribs (*σταμίνες*) covered with long planks (*ἐπηγκενίδες*) formed the sides (*τοῖχοι*) of the hull. From different statements in the *Iliad* and *Odyssey* it appears that the Homeric ship had either 20 or 50 oarsmen. Where a crew numbers 52, a couple of officers are perhaps included. More than 50 rowers need not be assumed: for the epithet *ἐκατόζυγος* describes proverbially a ship of unheard-of size; and, though Boeotian ships carrying 120 men apiece are mentioned in the *Catalogue*, we are not told that all were rowers. There is then no reason to suppose that the men rowing were arranged in more tiers than one. Their oars (*ἔρεμα*), with blade (*πηδόν*) and handle (*κώπη*), somewhat resembled winnowing shovels, and were fastened to the gunwale by means of leather loops (*τροποί*). No reference is made to thole-pins (*σκαλμοί*), which probably were not used, though they were known to the later Greeks and appear in the Homeric hymn to Dionysus. The view has been held that *κλιῖδες* were tholes: but a consideration of the evidence leads to the conclusion that *κλιῖδες*, like *ζυγά*, denotes thwarts. These thwarts served the double purpose of beams and seats—an arrangement commended by its simplicity and confirmed by the *ζυγίται* of a later time. Each thwart probably seated two rowers, one on the port and one on the starboard side (cp. *Od.* XIII. 76 *τοὶ δὲ καθίζον ἐπὶ κλιῖσι ἕκαστοι | κόσμῳ*).

The compound *ἑσσελμος* means perhaps 'well-planked' rather than 'well-benched.' The hold (*ἀντλος*) below the beams was not decked, but there were raised deckings (*ἱκρια*) fore and aft. The forecastle could be used as a look-out post. The poop had space for the helmsman, and could accommodate a passenger for the night. In *Il.* xv. 729 Ajax, defending the stern of a vessel, quits the poop (*ἱκρια*) and retires *θρήννυ ἐφ' ἑπταπόδην*. The word *θρήνυς* elsewhere in Homer means 'a foot-stool,' and *ἑπταπόδης* in Hesiod means 'seven feet long,' not 'seven feet high.' Probably, then, the *θρήνυς ἑπταπόδης* was a fixed stool or bench extending across the vessel at the forward end of the poop, in such a position that the helmsman (*κυβερνήτης, κυβερνητήρ*) as he sat on the poop working the handle (*οἶήμιον, οἶήμια*) of the large steering oar (*πηδάλιον*) could rest his feet upon it. A poop of this kind, with two steps or stages, actually appears on 'Dipylon' ware (Fig. 127, cp. Fig. 128). Over the poop towered the tail-piece (*ἄκρα κόρυμβα*) of the vessel, an ornamental prolongation of the keel at the stern, which seems to have been regarded as inviolable (*ἄφλαστον* from *φλάω* = *θλάω*): to cut off the enemy's tail-piece was to secure a trophy. This ornament began by resembling the tail of a fish (Fig. 122), but came to look more like that of a bird with an increasing number of plumes falling gracefully towards the poop (Fig. 125). On Egyptian ships it had the form of a lotus-bud or flower. The waist of the Homeric vessel, being much lower than forecastle or poop, was provided with wattled screens or bulwarks: these are shown on later vase-paintings (see the Rhodian *ρίναξ* Fig. 125). When Odysseus made them for his craft, 'he laid much brushwood thereon,' so as to have a stout fence to keep out the spray.

The single mast (*ἰστός*) was probably stepped into the keel. Its heel was supported by a prop (*ἰστοπέδη*), which, to judge from the expression *κόλῃς ἔντοσθε μεσόδμης*, was a box whence the mast could be lowered aft into a rest (*ἰστοδόκη*): the whole arrangement is seen in the 'Cypriote' models mentioned above. The mast was secured by two forestays (*πρότονοι*) and one backstay (*ἐπίτονος*). On it was a yard (*ἐπίκριον*) that carried a lugsail (*ἰστίον, ἰστία* perhaps because made of several pieces) of white canvas (*σπίρον*) or cloth (*φάρσα*). Halyards would be necessary for the operation of hoisting sail; and sail would be shortened by means of brailing-ropes (*κάλοι*). The *ὑπεραι* or 'upper ropes' are probably braces for moving the yard horizontally. The *πόδες* or 'lower ropes' are sheets attached to the lower corners of the sail. The ropes in general were made of twisted ox-hide or the fibres of the papyrus-plant. Ships were moored by cables from the bows and stern. Heavy stones (*εἴναί*) were cast out at the bows in lieu of metal anchors. And mooring-cables (*πρυμνήσια, πείσμα, πείσματα*) were run out from the stern to the shore, where they were attached to a rock or a holed stone. After mooring the ship the crew could disembark. If small boats were not used for the purpose—and there is no allusion to them—this may have been effected by reeving

a double rope through the mooring-stone (hence *τρητὸς λίθος*) at one end and the anchor stones at the other: it would then be possible to haul in or haul out either from the ship itself or from the quay. A long pole (*κοντός*) would assist in the process. When beached, the vessel was supported by blocks or shores of stone (*ἔρματα μακρά, ἔχματα*).

612. The characteristic feature of merchantmen was their breadth (*Od.*

Details of
Homeric
ships.

ix. 323 *φορτίδος εὐρείης*). Odysseus' raft (*σχεδίη*) resembled them in size and apparently also in structure. War-ships, on the other hand, were distinguished by their speed (*θοαί νῆες*).

In sea-fights, bronze-shod pikes of enormous length, made of pieces of wood glued together, were employed: cp. the huge spear on an Etruscan *krater* figured below (Fig. 133). Homeric epithets for ships refer to their colour, form, speed, or skilful build. The tarred hulls (*μέλαιναι*) were often painted at the bows with blue (*κυανόπρωρος, κυανοπρώρειος*), or crimson (*φουαικοπάρης*), or vermilion (*μιλτοπάρης*). These colours, together with their inevitably beautiful lines (*κορωνίδες, ὀρθόκραραι*, and perhaps *ἀμφιέλισσαι*), appealed to the eye. Their speed (*θααί, ὠκείαι, ὠκύποροι, ὠκύαλοι, ποντοπόροι*) and ingenious construction (*γλαφυραί, κοίλαι, εὐεργής, εὐσσελμοί, εὐζυγοί*) made a similar appeal to the imagination.

613. The Hesiodic poems (*circa* 700 B.C.) make use of the traditional epithets and add a few practical directions. There are two

Hesiodic ships.

sailing seasons: the first and more risky one in spring after the rising of the Pleiads; the second between midsummer and autumn: between the two the northerly Etesian winds are blowing in the Aegean. When the Pleiads set, the ship is to be beached and a stone fence built about it to keep off the wind and rain: the plug (*χείμαρος*) must also be pulled out lest the rain rot the bottom: tackle, sail, and steering-oar are to be carefully stored at home till winter is over. The wise man will bestow his cargo aboard a big merchantman, and will have nothing to do with a little ship. This allusion to small craft and the phrase *νῆας πήγγυσθαι ἀραιάς* recall the graceful little vessels depicted on Boeotian bronzes of the 'geometric' period (eighth or seventh century B.C.). A *fibula* in the British Museum shows a ship of the sort handled by two men (Fig. 124). Besides the high stem and stern, the small deckings fore and aft, the *ἄφλαστον*, and the single mast in its step, there are several new features to be noted. The horizontal timbers project at either end so as to form teeth; and there is a substantial spur at the bows—an innovation that effectually changed the crescent appearance of the earlier hulls. Cabins of lattice-work are shown, and perhaps a lantern at the mast-head. The steersman is plying the paddle over a rowlock with the instep of his foot—a departure from Homeric custom which may be witnessed in the Mediterranean to this day.

614. During the seventh and sixth centuries the prevailing types of war-ship were fifty-oared vessels (*πεντηκόντοροι*) and long-boats.

Penteconters.

The latter were called *πλοῖα μακρά* or *νῆες μακραί* as contrasted

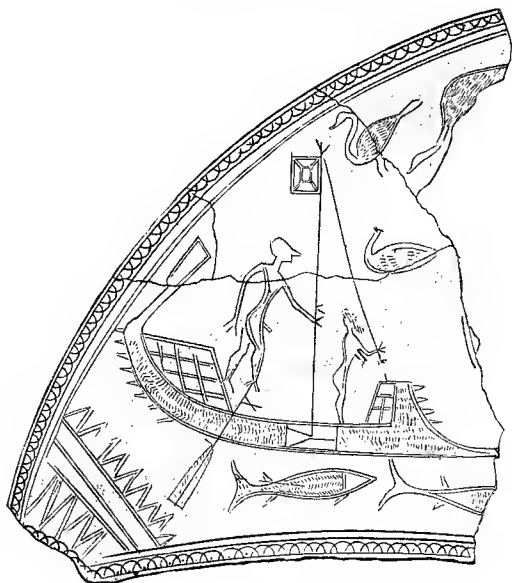


Fig. 124. Ship on a Boeotian *fibula*.

not with the former but with the *πλοῖα στρογγύλα* or *νῆες στρογγύλαι*, 'round' ships or tubs, *i.e.* merchantmen (*γαῦλοι*, *ὀλκάδες*) broad of beam. We must not therefore assume that the penteconters were shorter than the long-boats. In all probability they were the direct descendants of the Homeric ships of 50 oars—long vessels with small decks fore and aft, carrying one tier of rowers 25 a side. A good illustration of such a boat, despite the deficient number of oars, may be found on a Rhodian *pinax* now in the British Museum (Fig. 125). It is approximately of the same date as the Boeotian bronzes, but shows a much longer vessel. The curved keel is prolonged upwards at the bows and bears a fine *ἄφλαστον* at the stern. The hull terminates forwards in a formidable spur. Small decks or cabins are visible fore and aft, bulwarks of interlaced hoops between them, a couple of steering paddles and eleven oars. Another vessel on a similar *pinax* has her bows shaped like a boar's head with projecting snout. According to Herodotus this form of prow was characteristic of the Samian navy in the time of Polycrates (532—522 B.C.); and Plutarch states that the *Σάμαινα* or ship of Samian build was invented in Samos during his reign. But it is probable that the boar's-head prow was in vogue in the Aegean at an earlier date and was not confined to Samian vessels: cp. Theseus' vessel on the François vase, which is of

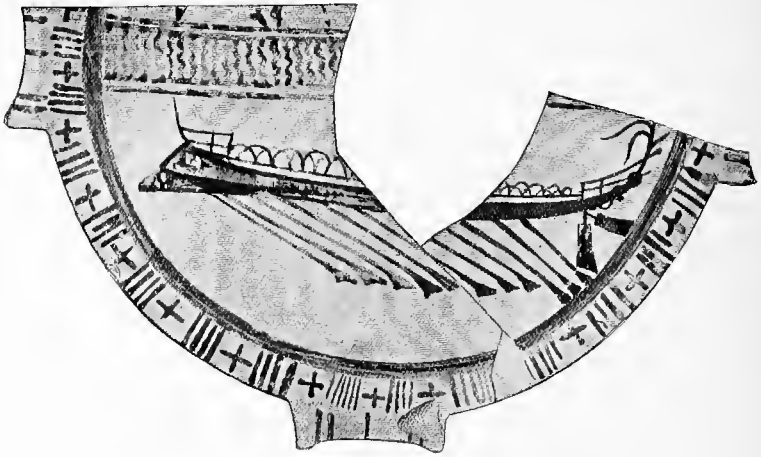


Fig. 125. Ship on a Rhodian *pinax*.



Fig. 126. Ship on the François vase.

Athenian fabric and dates from the first half of the sixth century B.C. (Fig. 126).

615. Long-boats may be recognised in the war-galleys depicted on the 'Dipylon' ware of the eighth or seventh and on the Long-boats. black-figured Attic vases of the sixth century. These classes of pottery enable us to trace an advance in ship-building. Of the fragments found near the Dipylon at Athens one represents a vessel much like the Rhodian penteconter, except that the foredeck forms two stages while the bows are marked with a wheel-shaped patch (cp. the later eye). Others give a view of both gunwales in primitive perspective (Fig. 127). The waist is fitted with a trellis-work of cross-bars, which served as rowlocks, the oars being presumably attached to the vertical and passed beneath the horizontal bars. The mast, where present, carries an oblong sail; and the position of sheets, braces, and halyards working through hooks can be determined. Fragments that appear to show two distinct



Fig. 127. Ship on a 'Dipylon' vase.

tiers of rowers must not be taken to represent triremes, but long-boats seen in the same crude perspective, the further set of rowers being figured above the nearer set. A large terracotta *lebes* found near Thebes and now in the British Museum affords a very complete picture of such a galley (Fig. 128). Nineteen men on the one side and twenty on the other are pulling their oars over a couple of horizontal rails connected with the gunwale by means of uprights. The oars are fastened to single thole-pins, though the straps are not shown. The artist has made the further oars stop suddenly on reaching the nearer oars, presumably to avoid complication of lines. The rail projects beyond the stem-post, thereby forming a tooth, and the keel is similarly prolonged into a spur. The ἄφλαστον is simple and less decorative than the recurved ornament (? a horn) above the cut-water. A shield is slung on the poop, from which the helmsman plies two large paddles; and it is a fair inference from the shield that the expedition represented is one of a warlike character. The captain, clasping the wrist of his wife, is about to step on board. An ivory relief from the sanctuary of Artemis Orthia at Sparta (*circa*. 600—550 B.C.) represents a war-ship of similar build using a sail instead of oars (Fig. 129). Three warriors are seated on deck; three sailors are occupied with the rigging; one man fishes from the raised prow; another crouches on the long spur; the steersman sits at his paddles; and the captain, as before, bids farewell to his wife.

The black-figured vases attest a change. In the 'Dipylon' galleys (eighth or seventh cent.) the rowers were exposed to view (? ἄφρακτοι) and plied oars attached to tholes. In the 'black-figured' galleys (sixth cent.) they row through ports and are no longer visible (? κατάφρακτοι); for the space once covered by the cross-bars has become part of the vessel's side. A vase by the painter Aristonophus (*circa*. 650 B.C.) marks the transitional stage: the rowers, though still exposed to view, are rowing through ports. Other details of the long-boats may be learnt from the black-figured vases, on which they frequently figure. The keel sweeps upwards in a gradual curve at

the stern, and sometimes ends in a goose-head ornament (later called *χηνίσκος*). As a rule there is no poop, because the waist of the ship has

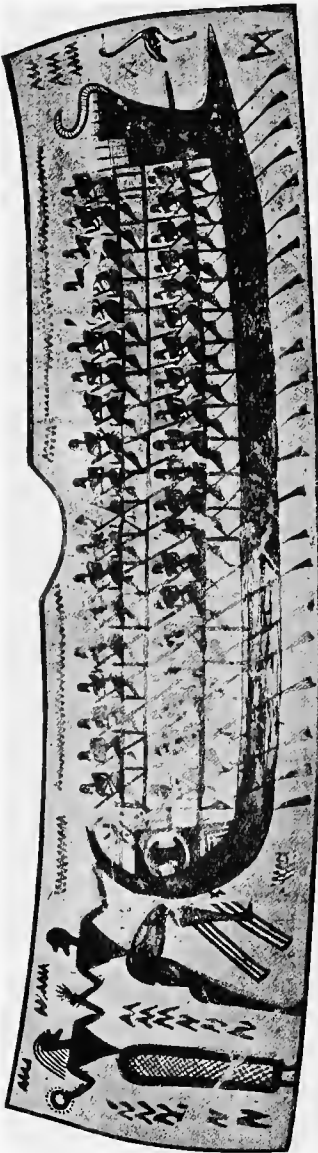


Fig. 128. War-ship on a lebes from Thebes.

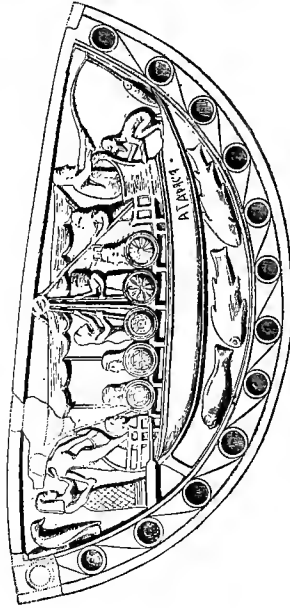


Fig. 129. Ivory relief of a war-ship from Sparta.
(From *The Annual of the British School at Athens*, 1906—7, xiii. pl. 4. 2.)

been raised to the height of the former poop. A gangway or landing-ladder is sometimes slung aft; for it was by the stern that vessels were moored to the quay. Forward there is an elevated stem-post, which rises above a forecastle of considerable size. The forecastle is occasionally in two stages, and sometimes adorned with a diaper pattern. Below it projects a long spur, commonly shaped like the head of a boar or fish. Sometimes a large eye is added on the bows. Usually a railing of some sort extends as a bulwark from forecastle to stern. Where oars are shown, they are arranged sometimes in one tier starting from rowlocks on what is now the gunwale, sometimes in two tiers (cp. Aesch. *Ag.* 1617 f.) of which the upper starts from rowlocks on the gunwale, the lower from ports diagonally or vertically below the upper oars. The number of oars visible varies (e.g. 14 in one tier, or 9 + 9, 9 + 10, 11 + 12). One, or more often two, steering-paddles appear at the stern. There is always a mast and an oblong sail. But in vessels prepared for action they are cleared out of the way; or at least the sail is brailed up to the yard. The mast has sometimes halyard-hooks. The yard is formed of two pieces lashed together (hence *κεραῖαι*). And the rigging includes, as before, halyards, brailing-ropes, braces and sheets. A sample long-boat of about 500 B.C. may be seen on a *kylix* from Vulci now in the British Museum (Fig. 130).



Fig. 130. War-vessel on a *kylix* from Vulci.

616. In round-boats as contrasted with long-boats the waist was continuous with forecastle and poop. The prow, instead of being shaped into spur or snout, formed a curve roughly

Round-boats.

corresponding with that of the stern (Fig. 131). Sails were used in preference to oars, though a score of the latter might be carried for occasional purposes. These differences are explained by the fact that the round-boat was built for a cargo, whereas the long-boat was built for ramming the

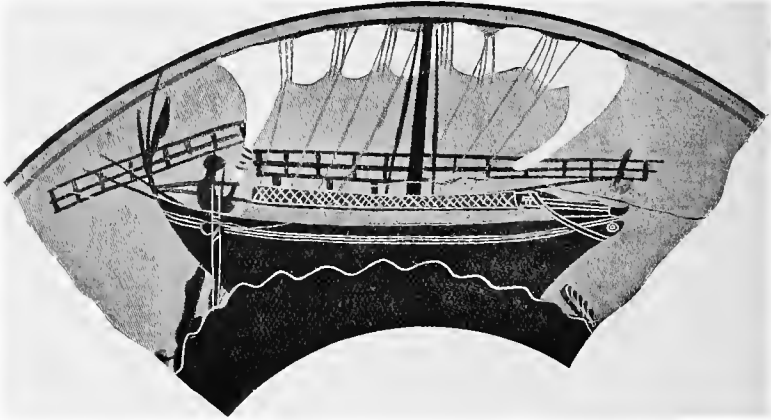


Fig. 131. Merchant-vessel on a *kylix* from Vulci.

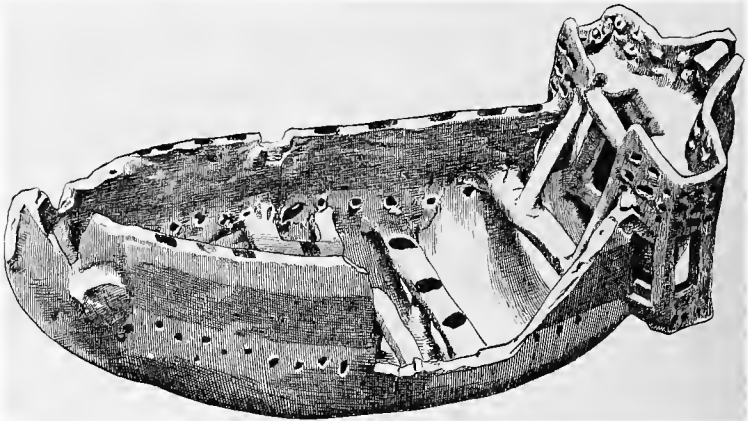


Fig. 132. Model of ship with turrets from Amathus.

enemy. On vases of the sixth century merchant vessels have bulwarks of railings or lattices: later wooden walls (*παραφράγματα*) and turrets (*πύργοι*) were used as a protection against pirates. These turrets, which projected overboard, might be as many as eight in number and of considerable height. The earliest evidence of them is a terracotta model (sixth cent.)

from Amathus, now in the British Museum, which has two near the stern (Fig. 132). Merchantmen had a mast and sail of the usual pattern. In addition to the foregoing there were doubtless many types of vessels to be seen in Greek waters before 500 B.C. Small craft of all kinds (*ἄκατοι, κέλητες, κέρκουροι, ἐπακτρίδες*, etc.) must have been very numerous. If the vase paintings found in Italy and Sicily may be trusted, ship-builders affected more or less grotesque animal forms: the whole boat was made to resemble a boar (Fig. 133), a shark (cp. later *πίστευς*), a bird (Fig. 134, cp. later *κύκνοι*), etc., and the outline was some-

Other types.

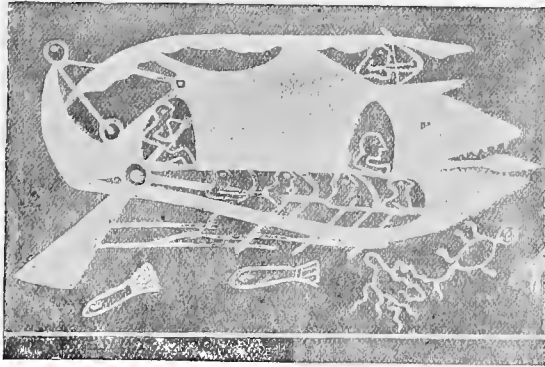


Fig. 133. Boar-shaped vessel on an Etrusco-Ionian *krater*.

times completed by awnings or by more permanent structures erected on deck (Fig. 133).

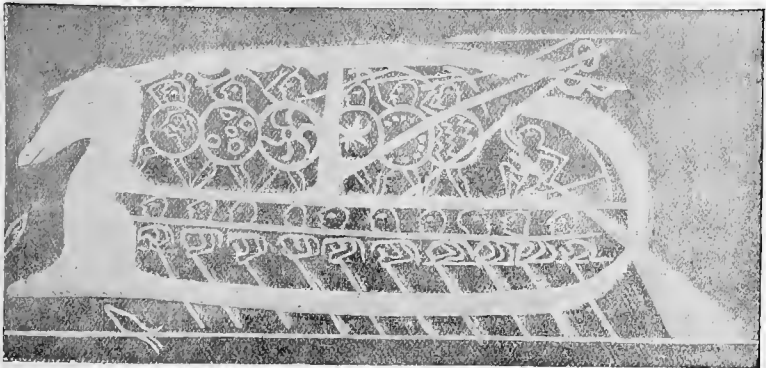


Fig. 134. Bird-shaped vessel on an Etrusco-Ionian *krater*.

617. Clement of Alexandria preserves the tradition that the Sidonians were the first to invent a three-banked vessel (*τρικροτον ναῦν*). Herodotus says that triremes (*τριήρεις*) were used on the Mediterranean and the Arabian Gulf by Necos, who was king of Egypt in 600 B.C. They seem to have been adopted by the Greeks at an even earlier date, though a couple of centuries or more elapsed before they superseded all other types of vessels as men-of-war. According to Thucydides (I. 13), 'The Corinthians are said to have been the first to adopt something like the modern style of ship-building, and the oldest Hellenic triremes are said to have been constructed at Corinth. A Corinthian shipwright, Ameinocles, appears to have built four ships (*ναῦς*) for the Samians; he went to Samos about 300 years before the end of the Peloponnesian War.' If Pliny (*H. N.* VII. 206) was right in understanding Thucydides to assert that Ameinocles made four *triremes* for the Samians, we must suppose that the historian dated the introduction of triremes into Greece at about 700 B.C. This is usually regarded as an anachronism, but is by no means impossible. Thucydides goes on to mention the navies of Corinth and Corcyra about 664 B.C., that of the Ionians between 559 and 521 B.C., that of Polycrates between 546 and 538 B.C., and the Phocæan fleet that colonised Massilia a few years later than 600 B.C. 'These,' he continues, 'were the most powerful navies, and even these... appear to have consisted chiefly of fifty-oared vessels and galleys of war with but few triremes.' It is surely implied that here and there triremes were to be found as early as 664 B.C. If so, Ameinocles may have built four of them in 704 B.C. However that may be, Thucydides adds that about 490 B.C. the Sicilian tyrants and the Corcyraeans had triremes in considerable numbers at a time when the Aeginetan and Athenian fleets were small and composed mainly of penteconters. It was Themistocles who inaugurated (483 B.C.) the policy of maintaining a large permanent fleet by building one hundred triremes, which were used at Salamis; and these triremes, unlike later triremes, were not decked throughout.

618. The word *τριήρης* means 'trebly-equipped' ($\sqrt{\text{τρ}}$ of *ἀραρίσκω*, cp. the cognate *τριάρμενος* applied to three-decked sailing-ships) and does not itself denote that the vessel had three tiers or banks of oars. It is, however, commonly held that such was the case, the rowers of the lowest tier being termed *θαλαμίται*, *θαλάμακες* or *θαλάμιοι*, because they sat in the hold (? *θάλαμος*), those of the middle tier *ζυγίται* or *ζύγιοι*, because they sat on the beams (*ζυγά*), those of the highest tier *θρανίται*, because they occupied benches analogous to the *θρήνυς* of the Homeric steersman. This view, while satisfying the literary allusions, is supported partly by the *a priori* consideration that, just as the long-boat with two banks was an improvement upon the penteconter with one, so the trireme with three would have been an improvement upon the long-boat with two; partly by archaeological evidence,

Origin of triremes.

Usual theory of the trireme.

which must be briefly summarised. A relief (Fig. 135) found on the Acropolis at Athens and dating from about 400 B.C. shows part of a ship, whose details have been explained (Torr, *Anc. Ships* p. 45, n. 109) as follows. The hull is marked by five parallel bands. The two lowest are waling-pieces (later *ζωστήρες*), that is, projecting timbers forming

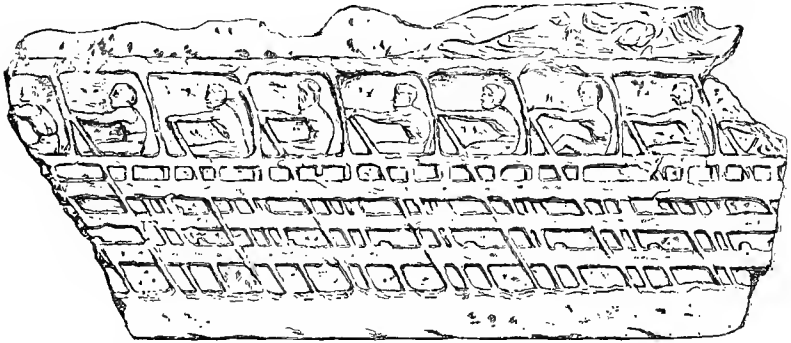


Fig. 135. Waist of a war-vessel on a relief from Athens.

horizontal lines round the vessel. Between them are the ports of the *θαλαμίται*. The third band is the gunwale: between it and the upper waling-piece are the ports of the *ζυγίται*. On seats raised slightly above the gunwale the *θρανίται* are represented rowing oars that are attached to tholes and seemingly pass under the fourth band, which may be a gangway (*πάροδος*). Above the *θρανίται* is a structure resembling a modern hurricane-deck supported on uprights. The same arrangement of waling-pieces, gunwale, gangway and hurricane-deck recurs on coins of Cius in Bithynia about 300 B.C. Again, a trireme on Trajan's column has three tiers of oars, the *θαλάμιοι* coming through ports between two waling-pieces, the *ζύγιοι* through ports just below the gunwale, the *θρανίτιδες* through lattice-work above the gunwale. With regard to the internal arrangement of *θαλαμίται*, *ζυγίται* and *θρανίται*, it is held that each rower sat below but a little to the rear of the rower above him, so that *θαλαμίτης ζυγίτης θρανίτης* formed an oblique, not a vertical line: this would economise space and facilitate their movements. Others think that the *θαλαμίται* sat close to the vessel's side, the *ζυγίται* higher up were distant from it the breadth of one thwart, the *θρανίται* still higher were removed by the breadth of two thwarts: the oar of each rower would then pass over the head of the rower below.

619. The difficulties attached to all hypotheses based on the assumption of *superimposed* tiers of oars become impossibilities when we advance from triremes to ships with 5, 10, 15, 20, 30 and even 40 banks of oars. In fact, the only escape from them lies in the direction of a very different theory. Col. Yule (*Travels of Marco Polo* i. pp. lx.—lxix.) remarks that the mediaeval fleets had galleys termed by Italian writers biremes, triremes and quinqueremes, the distinction between which depended on the number of rowers that sat on one bench pulling each his separate oar, but through one rowlock port. The system of grouped oars was in vogue down to the sixteenth century. The width of the galley was much increased by an outrigger deck projecting beyond the ship's side and supported on timber brackets. This framework was the rowlock upon which the oars rested and to which they were fastened by strap and thole pin. In the centre line of the deck ran a raised gangway clear of oars. Each galley had from 25 to 28 benches a side arranged as in the diagram (Fig. 136), where *a*, *b*, *c* mark the

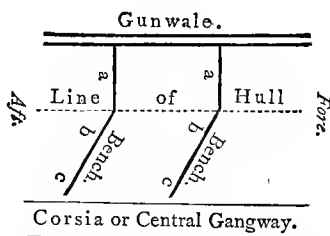


Fig. 136. Arrangement of rowers in a mediaeval trireme.

position of the three rowers. In front of each bench was another lower bench or stretcher: the stroke was given by the rower mounting upon his stretcher and letting himself fall back in a sitting posture on the rowing-bench. Mr H. F. Brown (*Academy*, Sept. 29, 1883, p. 219 f.) suggested that this arrangement of rowers might explain the Greek trireme. And Prof. Ridgeway inclines to the same view, adding that in all likelihood the traditional build of Greek and Roman galleys descended through the Byzantine fleets to those of Ravenna, Venice, etc. The Greek trireme on this showing had rowlock-ports, through each of which passed three oars plied by three men seated on one bench. We thus obtain for the first time an adequate explanation of Aeschylus' strange periphrases *τρίσκαλμοι νᾶες*, *τρίσκαλμοι βάριδες* (*Pers.* 679, 1075): a vessel with three tiers of oars *superimposed* could not be described as 'a three-

tholed barge' any more than a building with three stories as 'a three-windowed house'; but if each porthole had three thole-pins for its three oars, then the distinctive feature of the ship is well expressed by the word *τρίσκαλμος*.

As to the terms *θαλαμίτης*, *ζυγίτης*, *θρανίτης*, two possibilities present themselves. (1) On the one hand Mr W. W. Tarn, who accepts the system of grouped oars, argues well (*Journ. Hell. Stud.* 1905, xxv. 139 ff., *Class. Rev.* 1906, xx. 75 ff.) in defence of the view that these terms had nothing to do with the horizontal rows or banks of oars, but denoted three divisions or squads of rowers, the 'thranites' being astern, the 'zygites' amidships, the 'thalamites' in the bows. He contends that the 'thalamites' got their name from the *θάλαμος* or 'cabin' in the bows, the 'thranites,' as Prof. Ridgeway (*Class. Rev.* 1895, ix. 266) suggested, from the *θρήνυς* or 'raised step' of the helmsman astern. This explanation is certainly tenable, though it does not agree with all the statements of the ancient scholiasts and lexicographers. (2) On the other hand, it may be held that the *θαλαμίτης* was the man who rowed nearest to the porthole (*θαλαμιά* Hdt. v. 33, cp. Ar. *Ach.* 553, *Peace* 1232); the *ζυγίτης*, he who sat next him originally on the beam (*ζυγόν*); the *θρανίτης*, he who worked the longest oar by rising on a stool (*θράνος*) to gain force for his stroke. If we suppose that the rowers' bench was in three steps or levels, we can satisfactorily account for all passages cited in proof of superimposed rowers e.g. Schol. Aeliani quoted by Graser *de re navali* § 4 *ἡ μονήρης καὶ διήρης καὶ ἐφεξῆς (λέγεται) κατὰ τοὺς στίχους τοὺς κατὰ τὸ ὕψος ἐπ' ἀλλήλους, Etym. Mag. s.v. θαλάμια κῶπαι...ὁ κατώτατος ἐρέτης θαλάμιος λέγεται, ὁ δὲ μέσος ζύγιος, ὁ δὲ ἀνώτατος θρανίτης*. If again we suppose that the bench was bent aft as in the mediaeval galleys, we can understand such passages as Schol. Ar. *Ran.* 1074 *θρανίτης οὖν ὁ πρὸς τὴν πρύμναν· ζυγίτης ὁ μέσος· θαλάμιος ὁ πρὸς τὴν πρῶραν*, for *c* is nearer to the stern than *b*, *b* than *a*. The trireme would still be *τρίκροτος ναῦς*, propelled by three *στοῖχοι* of oarsmen; for if we stood at the prow and looked aft, we should see three ascending files of men on port and starboard side respectively¹.

Neither view excludes the employment of two tiers of rowers. Marino Sanuto (A.D. 1300—1320) speaks of two-deckers in which each deck was occupied by groups of three or four men to a bench. Similarly the acropolis relief may be taken to represent two tiers of *θαλαμίται* with their oars, the lower tier rowing through ports just above the lowest waling-piece: the other sloping lines may be strengthening timbers of some sort, if not brackets supporting an outrigger-deck like that of the Venetian galleys. The vessel on Trajan's column has two

¹ See *Classical Review* xix. 376 for the elevation and cross section of a model trireme arranged on this hypothesis.

possible tiers of oars rowed through port-holes in her side, and one admittedly impossible tier rowed through lattice-bulwarks. In short, this theory satisfies all the literary and archaeological evidence hitherto adduced. It has also the great advantage of showing—as will be seen later on—how the trireme-system developed into that of the many-banked vessel. It may be added that in 1883 Rear-Admiral Fincati of the Italian navy made practical experiments with Venetian barges arranged in the two conflicting methods, the superimposed and the side by side. He found that, while the former was almost unmanageable, the latter gave the surprising speed of nine miles an hour.

620. Concerning Attic triremes of the fourth century valuable information is afforded by inscriptions containing inventories of

Details of
the trireme.

the Athenian dockyards between 373 and 323 B.C. (C.I.A.

II. nos. 789—812). From these we gather that triremes

commonly had as many as 200 oars, *viz.* 54 *θαλάμιαι*, 54 *ζύγαι*, 62 *θρανίτιδες*, 30 *περίνεω*, though lower numbers also are found. Two questions arise. Why more *θρανίτιδες* than *θαλάμιαι* or *ζύγαι*? And what were the *περίνεω*? To neither question can a certain answer be returned. It is probable that, where the converging lines of the gunwale left insufficient room for benches of three rowers each, a couple of *θρανίται*, seated one in front of the other, were accommodated on either side of the vessel fore and aft: the space altogether beyond the oars at the bows and stern was called the *παρέξειρεσία*. It is also probable that the *περίνεω* were simply 'spare oars' for use in case of accident. The oars were of no great size; for they could be shouldered gear and all on a forced march. Thus the *περίνεω* measured only 9 or 9½ cubits in 373—372 B.C. All the oars were worked against tholes (*σκαλμοί*), to which they were fastened by leather loops (*τροπωτήρες*, *κωπητήρες*). The port-hole was fitted with a leather flap (*ἄσκωμα*), probably to protect the woodwork from friction. When a trireme was used as a transport for cavalry (*ἵππηγός*, *ἵππαγωγός*) her oars were reduced to sixty in number, and the hold was occupied by the horses. On either side of the bows one, or sometimes two large eyes (*ὀφθαλμοί*) probably served as hawse-holes. Just behind these were massive projecting cat-heads (*ἐπωτίδες*), which served a double purpose. From them the anchors (*ἄγκυραι*) of iron weighted with masses of stone and lead, later of lead throughout, were slung; and, in ramming an enemy's ship, the cat-heads would protect the oars from damage. They were sometimes enlarged and strengthened by props (*ἀντηρίδες*) in order to inflict injury on the hostile prow. Gunwale and gangway ended at the cat-heads. The projecting spur carried a ram (*ἔμβολος*) with an auxiliary ram (*προεμβόλιον*) above it. Rams had three teeth and were of wood sheathed with bronze, they were sometimes twisted or torn off from the trireme's nose (*σίμωμα*) by the shock of the collision. So great was this shock that the timbers of the vessel ramming had to be secured from

starting by means of two or more girdling cables (*ὑποζώματα*) passed horizontally round the entire hull. Above the ram rose an elevated stem-post; and ship was distinguished from ship by a badge (*σημείον*), which might be a carved figure-head (*ἐπίσημον*) or a relief or painting on the bows (*παράσημον*). The stern still terminated in a curved tail-piece: hence coins of Phaselis in Lycia show the hinder part of a war-ship with an *ἄφλαστον* bent towards the mast. The stem and more often the stern ornaments (*ἄκρωτήρια*, later *ἄκροστόλια*) were lopped and kept as trophies. The steering apparatus consisted, as before, of two large oars (*πηδάλια*, sometimes *πλήκτρα*) tied between two pegs just below the gunwale with a loop (*ξεύλλη*). The term *οἶαξ* properly denotes the handle of a steering oar, but was also used of the entire paddle including the blade (*πτέρυξ*). The two handles were perhaps connected by a tiller (Plat. *Politicus* 272 E *πηδαλίων οἶακος ἀφήμενος*, cp. Lucian, *ναυίς*. 6 *ὑπὸ λεπτῆ κόμακι τὰ τηλικαῦτα πηδάλια περιστρέφων*).

Two kinds of sails, *ιστία μεγάλη* and *ἀκάτεια*, were used on Athenian triremes about 400 B.C. In prospect of a sea-fight the former were put on shore and the latter were hoisted. Corresponding to these two types of sail, two types of mast (*ιστὸς μέγας*, *ιστὸς ἀκάτειος*) and yard (*κεραῖαι μεγάλαι*, *κεραῖαι ἀκάτειαί*) are entered on the inventories about 350 B.C. Many ships carried a mast and yard of each kind for alternative use. Two timber supports (*παραστάται*) were employed for one or other of these masts. The ropes (*τοπέα*) about 350 B.C. were *ἱμάντες* or halyards(?), *πόδες* or sheets, *ὑπεραί* or braces, *ἄγκουα* or fore-stay(?), *χαλινός* or back-stay(?), *κάλως* or brailing-ropes(?). Not long afterwards the second or lighter rigging was discarded in the Athenian navy; for the inscriptions show that in 330 B.C. and the following years triremes had simply mast (*ιστός*), yard (*κεραῖαι*), sail (*ιστίον*), and ropes (*τοπέα*): these last included *μηρύματα καλωδίων* or loops of brailing-ropes(?) in place of the earlier *κάλως*; but other details are wanting. The sails were commonly of linen, and about 330 B.C. a finer and a coarser variety of sail-cloth were in use. The ropes were mostly made from flax or papyrus-fibre. Protective awnings of sail-cloth or horse-hair were spread over the open spaces on board before a fight. Triremes in 406 B.C. carried *παραρρύματα*, in 405 and again about 377 *παραβλήματα*. In 357—356 each trireme had two *παραρρύματα λευκά*, two *παραρρύματα τρίχυνα*, one *κατάβλημα*, and one *ὑπόβλημα*. In 325—324 triremes still had these four varieties, but by 323—322 the *ὑποβλήματα* had been dropped. Some such coverings are carried on the poop of a black-figured long-boat now in the British Museum. Gangways (*ἀποβάθραι*), ladders (*κλιμακίδες*, *κλίμακες*), and poles of various sizes (*κοντοί*) also formed part of a war-ship's equipment. Attic long-boats and triremes were built of fir, or failing that of pine: for merchantmen pine was preferred. Triremes had, however, a keel of oak, since they were frequently hauled ashore: merchantmen had a keel of pine, with a false keel of oak or beech. The

remains of the ship-sheds at Zea and Munychia, each built to contain one trireme, show that the sheds were originally about 20 feet broad by more than 144 feet long: the beam of an Attic trireme was therefore about one-seventh of its length.

621. Quadriremes (*τετρήρεις*) were first built by Dionysius I of Syracuse in 398 B.C. according to Diodorus, though Aristotle ascribed the innovation to the Carthaginians. Inscriptions of 330/329 and 325/324 B.C. mention quadriremes at Athens. The number and management of their oars is unknown. If triremes were rowed by three men to a bench, quadriremes were probably manned on the same principle, like the Venetian galleys of A.D. 1316 with four rowers to each bench. Quinqueremes (*πεντήρεις*) also were invented by Dionysius I in 398 B.C., if Diodorus is to be trusted: Pliny states that they originated at Salamis. Dionysius II had some in his fleet, and they appeared in the Athenian inventories in 325/324 B.C. At the battle of Ecnomus in 256 B.C. the Roman and Carthaginian quinqueremes carried about 300 rowers and 120 combatants apiece. In 212 B.C. we hear of 400 rowers aboard a quinquereme, and of the same number in A.D. 40. Of their distribution we know nothing. But again the probability is that ancient, like mediaeval, quinqueremes were rowed by five men on each bench pulling five oars through one rowlock-port.

622. Throughout the latter half of the fourth and the whole of the third century B.C. the kings of Sicily, Macedonia, Asia and Alexandria rivalled one another in constructing enormous men-of-war. Ships of 6, 7, 8, 9, 10, 11, 12, 13 and 15-fold equipment (*ἑξήρεις, ἑπτήρεις, κ.τ.λ.*) were successively multiplied. And even larger vessels were launched. Demetrius Poliorcetes in 288 B.C. built certain *ἑκακιδεκήρεις*, which were regarded as portents. One of them, or one like them, in the Macedonian fleet of 197 B.C. was expressly mentioned in a treaty with Rome: she sailed up the Tiber in 167 B.C. and gave her name to one of the Roman docks. Archimedes is said to have built an *εἰκοσήρης* for Hieron of Syracuse, and Ptolemy Philadelphus to have possessed one *εἰκοσήρης* and two *τριακοντήρεις*. The existence of such gigantic craft is proved by an inscription from the temple of the Paphian Aphrodite in Cyprus, which commemorates the builder of a 20 and a 30-fold vessel. Finally a *τεσσαρακοντήρης ναῦς* was constructed by Ptolemy Philopator (222—204 B.C.). It has sometimes been regarded as mythical: but Athenaeus v. 37 cites the description of it given by Callixenus of Rhodes, a contemporary of Philopator, and Plutarch, *Demetr.* 43, probably draws upon the same source. According to them its length was 280 cubits. Its beam (from *πάροδος* to *πάροδος*) 38 cubits. The stem towered up 48 cubits above the water; the stern-ornament, 53. The draught was less than 4 cubits. It had a double prow carrying 7 rams, and a double stern. There were 4 steering-paddles 30 cubits long. The

Vessels of
exceptional
size.

oars (κῶπαι θρανικαί) were weighted with an equipoise of lead at the handle end: the largest of them measured 38 cubits in length. Twelve girdling cables 600 cubits long strengthened the fabric of the boat. It held more than 4000 rowers, 400 sailors, 2,830 soldiers on the deck, besides servants, stores, etc. Callixenus' account of this leviathan throws some light on the other colossal vessels enumerated above. It could be floated in a dock 4 cubits deep; it had high stem and stern; it was 280 cubits long. These dimensions suggest comparison with a Nile-barge built by Sesostris, which also had a length of 280 cubits (Diod. i. 57). Probably Philopator's boat was a similar flat barge with but one tier of oars. It is noticeable that the τεσσαρακοντήρης, the τριακοντήρης, and one of the εικοσήρεις, were built by kings of Egypt, and might therefore naturally be modelled on the ordinary Nile-barge. The other εικοσήρης, the ἑκκαίδεκήρεις, πεντεκαίδεκήρεις, τρισκαίδεκήρεις, δωδεκήρεις, ἑνδεκήρεις, δεκήρεις, and ἑννήρεις, were all built either by the Ptolemies or by those who had come into frequent connexion with them, so that they too may well have been barges: the δεκήρεις under Antony at Actium are expressly said to have stood only 10 feet above water (Orosius vi. 19). The ὀκτήρης, ἐπτήρεις, ἐξήρεις in all probability were of like pattern. We must not, however, suppose that these exceptional vessels were rowed on the trireme system. Forty men on one bench pulling forty oars through one port is only less absurd than forty tiers of oars in a ship drawing four feet of water. The fact is that tiers of oars superimposed would very soon become impossible; and even grouped oars have a comparatively narrow range. The latter method which, as we have seen, was practised during the Middle Ages was in the first half of the sixteenth century superseded by the use of long sweeps plied by from 4 to 8 or even more men apiece. The Greek ἐξήρεις, etc. may have been rowed on the same system. This explanation squares with all that we know of the barges in question. Memnon, a historian of about Hadrian's time, describes (αφ. Phot. p. 226) an ὀκτήρης called ἡ Λεοντοφόρος, which belonged to the fleet of Heraclea on the Euxine in 280 B.C.: he tells us that it carried 1,600 rowers, 1,200 fighting-men, and 2 steersmen; also that 100 men rowed each file (στοῖχος). Now 100 rowers to each στοῖχος and 8 στοῖχοι on port and starboard side respectively amount to 1,600 rowers all told. Similarly the τεσσαρακοντήρης must have been a big barge with, say, 100 sweeps, each worked by 40 men. Of these 40 it is probable that 20 pulled, while 20 pushed: Babylonian boats of very considerable size were propelled in this manner (Hdt. i. 134).

The ships termed ἡμιολίαι or τριημιολίαι from about 350 B.C. onwards were presumably manned by 'once and a half' or 'thrice half' their normal crew. This may have been managed by doubling the rowers abaft the mast, as was the case with the *fuste* or lighter galleys of the Venetians, which had their oars in pairs from the stern to the mast but singly from the mast forward.

ἡμιολίαι or
τριημιολίαι.

623. It will be seen that three distinct stages can be traced in the evolution of the Greek war-ship. (1) The penteconter and long-boats had a single tier of oars, each oar being pulled by one man. Increase of motive power could as yet be secured only by lengthening the boat so as to accommodate more rowers. (2) Triremes, quadriremes, and quinqueremes made an advance by multiplying the number of rowers on each bench, the several rowers pulling their several oars through the same port-hole. (3) 'Εξήρηεις κ.τ.λ. further multiplied the oarsmen, while they economised the oars, probably by employing a single tier of sweeps, each of which was worked by from 6 to 40 men. Mediaeval galleys were evolved in precisely the same way, every successive stage being the result of practical experience and experiment.

624. The Greeks themselves distinguished between (a) an old and (b) a new method of naval warfare.

(a) The old method aimed at making the sea-fight resemble a land-fight. The vessels engaged had their decks crowded with hoplites and light-armed troops: these, as soon as they were within striking distance, attacked the enemy with spears, bows, etc., while the ships remained stationary; so that the issue was decided, not by the manœuvres of the rowers, but by the quantity and quality of the fighting men on board. This elementary method, which is illustrated by Figs. 133, 134, was still in use towards the close of the fifth century B.C. Thucydides describes the battle between the Corinthian and Corcyraean fleets off Sybota (432) as follows: 'The decks of both were crowded by heavy infantry, with archers and with javelin-men: for their naval arrangements were still of the old clumsy sort. The engagement was obstinate, but more courage than skill was displayed, and it had almost the appearance of a battle by land. When two ships once charged one another it was hardly possible to part company, for the throng of vessels was dense, and the hopes of victory lay chiefly in the heavy-armed, who maintained a steady fight upon the decks, the ships meanwhile remaining motionless.... Brute force and rage made up for want of tactics' (Thuc. I. 49). Later, such fighting was exceptional: e.g. Nicias' fleet in the harbour at Syracuse (413) were forced to contend ἀπὸ τῶν νεῶν πεζομαχίᾳ; and, when the Syracusans cut down their prows and strengthened their cat-heads (ἐπωτίδες) with additional timbers to increase the effect of their charge, the Athenians responded by the use of iron grapnels (χεῖρες σιδηραῖ) to prevent the ship which had charged from sheering off (Thuc. VII. 62).

(b) The new method, brought to perfection by the Athenians in the course of the fifth century B.C., involved a wholly different principle. The customary weapons of land-warfare were almost entirely discarded. Instead, the trireme itself was now regarded as a missile to be launched with sudden

violence against the vulnerable parts of the enemy's vessel and again as suddenly withdrawn by means of dexterous rowing. Especially characteristic of this method were the two manœuvres named *διέκπλους* and *περίπλους*. The *διέκπλους*, practised e.g. by the Ionian fleet at Lade (494) and mentioned in connexion with the Greeks at Artemisium (480), meant that a single line of ships passed between the ships of the opposing line, turned swiftly, and charged them from behind. The *περίπλους* consisted in out-flanking the enemy ships so as to charge them beak to broadside. It was in order to avoid the *διέκπλους* that the Peloponnesians in the Gulf of Corinth (429) 'arranged their ships in the largest circle possible without leaving an inlet, turning their prows outwards and their stern inwards: within the circle they placed the smaller craft which accompanied them, and five of their swiftest ships that they might be close at hand to row out at whatever point the enemy charged them.' To meet this the Athenians under Phormion 'ranged their ships in a single line and sailed round and round the Peloponnesian fleet, which they drove into a narrower and narrower space, almost touching as they passed, and leading the crews to suppose they were on the point of charging' (Thuc. II. 83 ff.). Both the *διέκπλους* and the *περίπλους* involved making an *ἐμβολή* or charge with the beak (*ἐμβολον*): but Athenian ships were too light in the bows for a direct prow to prow charge (*ἐμβολή ἀντίπρωρος*). As distinguished from these definite manœuvres a chance collision or unsystematic attack was termed *προσβολή*.

625. The trireme was much faster than the merchantman; for, though both were rigged alike, the former could supplement its sailing powers by means of a large number of oars, whereas the latter carried only a few for occasional use. Besides, the lines of the trireme were designed with a view to rapid movement, those of the merchantman with a view to storage-room. (1) Xenophon states (*an.* VI. 4. 2) that it was a very long day's voyage for a trireme with the help of its oars to go from Byzantium to Heraclea in Bithynia: the distance is at least 120 nautical miles; and, reckoning 'a very long day' at 16 hours, we thus obtain an average rate of at least $7\frac{1}{2}$ knots. The same author elsewhere (*Hell.* II. 1. 30) says that Theopompus of Miletus, who brought the tidings of victory from the Hellespont to Sparta in 405 B.C., reached his destination on the third day: now from Aegospotami to Gytheium, where he would land, is certainly not less than 330 nautical miles; Theopompus must therefore, at the lowest estimate, have covered 110 nautical miles per day. From Thuc. III. 36 ff. we learn that, on the voyage from Athens to Mytilene (at least 186 nautical miles), it was possible for a trireme making the passage at its topmost speed almost to catch up one that had started about 24 hours earlier but was in no particular hurry. (2) According to Apollonius Rhodius I. 601 ff., the distance from Mt Athos to Lemnos, i.e. about 30 nautical miles, is as much as a well-equipped *ὄγκας* could

Speed of
ancient
vessels.

traverse between dawn and midday: this gives about 5 knots as a good pace for a merchantman, and a total of some 60 per day. In Thuc. II. 97 it is asserted that 'the voyage round (from Abdera to the mouth of the Ister) can be made by a merchant vessel, if the wind is favourable the whole way, at the quickest in 4 days and as many nights': the distance in question is at least 460 nautical miles, *i.e.* 115 for each day + night. Herodotus observes (IV. 86) that a sailing-vessel (*νηῦς*) in the course of a long day can go 70,000 ὄργυιαι = a fraction over 69, and in a night 60,000 = a fraction over 59 nautical miles; nearly 130 in all, therefore, in a long day and a night. In Lycurg. *c. Leocr.* 60 we are told that from Athens to Rhodes was a four days' voyage: the distance is at least 264 nautical miles, which allows an average of 66 per day. A greater pace became possible in Hellenistic times. Pliny, *H. N.* XIX. *prooem.*, quotes some examples of exceptionally rapid passages. Arrian too speaks of traversing 500 stades, *i.e.* nearly 50 nautical miles, between sunrise and noon. In fact, ancient sailing records compare by no means unfavourably with the average rates of our own day.

For further details see A. Cartault, *La trière athénienne*, Paris, 1881, C. Torr, *Ancient Ships*, Camb. 1894, and in Daremberg-Saglio, *Dict. Ant.* Bibliography. s.v. 'navis' (Paris, 1904), pp. 24-40. Cp. also the able articles of W. W. Tarn on 'The Greek Warship,' *Journal of Hellenic Studies*, 1905, XXV. pp. 137-56, 204-24, on 'The Fleets of the First Punic War,' *ib.* 1907, XXVII. pp. 48-60, on 'The Dedicated Ship of Antigonus Gonatas,' *ib.* 1910, XXX. pp. 209-22, and on 'Thranite, Zugite, and Thalamite' in the *Class. Rev.* 1906, XX. 75-7.

* * * The theory of the trireme here advocated will be found set out (with illustrations of a model made under the direction of Mr Wigham Richardson) in *The Classical Review*, Oct. 1905, XIX. pp. 371-7.

VI. 12. THE CALENDAR.

626. THE civil or calendar day (*i.e.* our day of 24 hours), called by the Greeks *ἡμέρα*, or, for more exactness, *νυχθήμερον*, was reckoned from sunset to sunset. The period of darkness, *νύξ*, was divided into *ἑσπέρα*, *λύχνων ἀφαί*, *πρώτος ὕπνος*, *μέσαι νύκτες*, and *ἄρθρος*. The period of light, *ἡμέρα* in a restricted sense, was divided into *πρωί* (later *ἄρθρος*), *μέση ἡμέρα* or *μεσημβρία*, and *δείλη*. But *πρωί* is often contrasted (meaning 'early') with *δυσέ* 'late,' and *δείλη πρωία* with *δείλη ὀψία*. The dawn, *ἔως*, was reckoned by Homer as part of the day, later as part of the night. These periods were never exactly defined. A more careful measurement of time was introduced when Anaximenes (about 520 B.C.) borrowed from the Chaldaeans the *πόλος* or *γνώμων*, a kind of rude sundial, in which a perpendicular staff threw its shadow on a measured table. The daylight was then divided into twelve equal parts (*μέρη*, afterwards *ᾠραι*), which varied in length, of course, at different periods of the year. Another contrivance, which could be used in the dark, was the *κλειψύδρα*, a bronze cistern fitted with a tap which would emit a measured quantity of water in a given time. On a campaign, the night was divided into three or five equal *φυλακαί*, measured by a *κλειψύδρα*. As the nights and the *φυλακαί* grew shorter, the tap could be plugged to restrict the flow of water. Only astronomers regarded the day as a period of 24 equal hours (*ᾠραι ἰσημεριαί*).

627. Occasionally the year was regarded as divided into two seasons only, *θέρος* and *χειμών*. In this case, *θέρος* is sometimes meant to cover the six months from the morning rising of the Pleiades to their morning setting (mid-May—mid-Nov.): but, more often, it is the 'open' season (March—Nov.) when campaigning and voyaging were possible. Generally, however, the year was divided into three seasons *χειμών*, *ἔαρ*, *θέρος*. The hottest part of the summer was called *ὀπώρα*, and (after 450 B.C.) a fourth season, called *φθινόπωρον* or *μετόπωρον*, our 'autumn,' was commonly admitted. Various dates were assigned for the commencement of spring, but, since the morning-rising of Arcturus was always regarded as the beginning of autumn, probably the evening-rising of the same star was the most generally recognised commencement of spring.

628. The natural duration of a month, or moon-period (*μήν*), is 29 days 12 hours 44 min. 3 sec. The Greeks, who never knew this measurement exactly, estimated the month at 29½ days, and avoided the fraction by assigning 29 and 30 days to alternate months. The month of 29 days was called 'hollow' (*κοίλος*): that of 30 days 'full' (*πλήρης*). Each month was divided into three periods, *δεκάδες*, though in a 'hollow' month the last *decad* had only nine days. The periods were commonly named *δεκάς πρώτη* or *μηνὸς ἱσταμένου*, *δεκάς δευτέρα* or *μέση* or

The Day.

The Seasons.

The Month.

μηὸς μεσοῦντος and δεκάς τρίτη or μηὸς φθίνοντος, ἐξιόντος, λήγοντος. But the error in the estimate of a lunation was so great that, in early times, the months cannot often have corresponded with the moon and there was little reason to adhere to any precise rule in the naming of the days. Hence, in Hesiod (*Op.* 765—828), the days are numbered sometimes continuously from 1 to 30, sometimes by their place in a decad. But, after Solon's time, the method of intercalation was such that the month did correspond pretty nearly with the moon and most days were named according to their place in a decad, those of the last decad (*φθίνοντος*) being usually counted backwards. Hence, in Attic writers, the names of the days are as follows: 1, *νομηγία*. 2, 3, 4, *δευτέρα ἰσταμένου, τρίτη ἰσταμένου, τετράς ἰσταμένου* (κ.τ.λ.)—10, *δεκάτη ἰσταμένου*. 11, *ἐνδεκάτη*. 12, *δωδεκάτη*. 13—19, *πρώτη—ἐνάτη μεσοῦντος or πρώτη ἐπὶ δέκα—ἐνάτη ἐπὶ δέκα*. 20, *εἰκάς or εἰκάδες*. 21, *δεκάτη φθίνοντος or δεκάτη ὑστέρα*. 22, *ἐνάτη φθίνοντος or* (in the 4th century) *δευτέρα μετ' εἰκάδας*. 23, *ὀγδόη φθίνοντος or τρίτη μετ' εἰκάδας*. 24, *ἑβδόμη φθίνοντος or τετράς μετ' εἰκάδας*, and so on to 27, *τετράς φθίνοντος or ἑβδόμη μετ' εἰκάδας*. 28, *τρίτη φθίνοντος or ὀγδόη μετ' εἰκάδας*. 29, (in a full month) *δευτέρα φθίνοντος or ἐνάτη μετ' εἰκάδας*. 29, in a hollow month, or 30, in a full month, *τριακὰς or ἔνη καὶ νέα* ('old and new moon'). The name *δεκάτη προτέρα* also occurs, but it is uncertain whether it refers to the 10th or the 20th. It will be observed that there was no *δευτέρα φθίνοντος* in a hollow month. Theoretically, the months consisted of 29 and 30 days alternately, but (owing to the neglect of the odd minutes in the true lunation) an extra (*ἐμβόλιμος*) day was required every 32 or 33 months. This day was apparently inserted as *δευτέρα φθίνοντος* in a hollow month, so that occasionally three months of 30 days each occurred together.

629. The natural duration of a year, *i.e.* of the revolution of the earth

The Year.

round the sun, is 365 days 5 hours 48 min. 48 sec. This period may be measured from a solstice or from an equinox.

The Attic year began, theoretically, with the summer solstice, but the civil or calendar year began with the first day of Hecatombaeon, which fell always more or less near Midsummer. The following is a list of the Attic months:—

- | | |
|------------------------------|-------------------------|
| 1. Ἑκατομβαιῶν (about July). | 7. Γαμηλιῶν (Jan.). |
| 2. Μεταγειττιῶν (Aug.). | 8. Ἀνθεστηριῶν (Feb.). |
| 3. Βοηδρομιῶν (Sept.). | 9. Ἐλαφηβολιῶν (March). |
| 4. Πυανεψιῶν (Oct.). | 10. Μουνυχιῶν (Apr.). |
| 5. Μαιμακτηριῶν (Nov.). | 11. Θαργηλιῶν (May). |
| 6. Ποσειδεῶν (Dec.). | 12. Σκιροφοριῶν (June). |

Different places had different names for the months and began the civil year at different times. Those Laconian months of which the names are known appear to stand in the following order: 6, Ἀρτεμίσιος (March). 7, Γεράσιος. 8, Ἑκατομβεύς. 9, Φλιάσιος. 10, Ἡράσιος. 11, Καρνέος (August). The names and order of the Delian and Delphian months are

known and the names but not the exact order of the Boeotian months. In Delos, Elis and Boeotia the year began with the winter-solstice: in Sparta, Achaia and Aetolia with the autumnal equinox. Universally only 12 months were named and the intercalary month (to be presently mentioned) repeated the name of the month after which it was inserted.

630. Twelve months, of 29 and 30 days alternately, contain only 354 days, so that a twelve-month was short of a year by 11 days and a fraction, which fraction the Greeks never estimated exactly. The deficiency was supplied by inserting, every two or three years, an extra month of 30 days. In Athens, this month was inserted in winter after Ποσειδεών, and was called Ποσειδεών δεύτερος¹. In a cycle of 8 years (ὀκταετηρίς or ἐναετηρίς) three intercalary months were inserted, but so that there should never be thirteen months in two consecutive years. Eight years of 354 days contain 2,832 days, and three intercalary months of 30 days each raise this total to 2,922 days. This is equal to 8 solar years of 365¼ days. But 99 lunar months of 29½ days contain 2,923½ days, so that, by the end of 8 years, the νομηνία fell 1½ days before the actual new moon. Three intercalary days were therefore inserted every 16 years; but obviously these additional days, which made the months coincide with the moon, prevented the year from coinciding with the sun. The regulation of the calendar thus involved perpetual difficulties, and Meton, in 432 B.C., proposed a new and more satisfactory cycle of 19 years, in which there should be 7 intercalary months (see § 281). A modification of this cycle was introduced at Athens about 340 B.C., but afterwards the old ὀκταετηρίς was adopted once more. It should be observed that the importance of a correct calendar was brought home to everybody by the recurrence of certain fixed agricultural festivals. For instance, the προηρόσια, a festival which preceded the autumn ploughing, was fixed for a date in Boedromion, and the Panathenaea, a festival held on the conclusion of harvest, was fixed for a date in Hecatombaeon. It would have been absurd to hold these festivals on the given dates, if the dates did not coincide nearly with the agricultural operations thus celebrated. It may be inferred, therefore, that the charge of the calendar was committed everywhere to certain ἱερομνήμονες, whose duty it was to secure the regular performance of proper rites: but very little information is obtainable on this point (cf. Aristoph. *Nub.* 615—626).

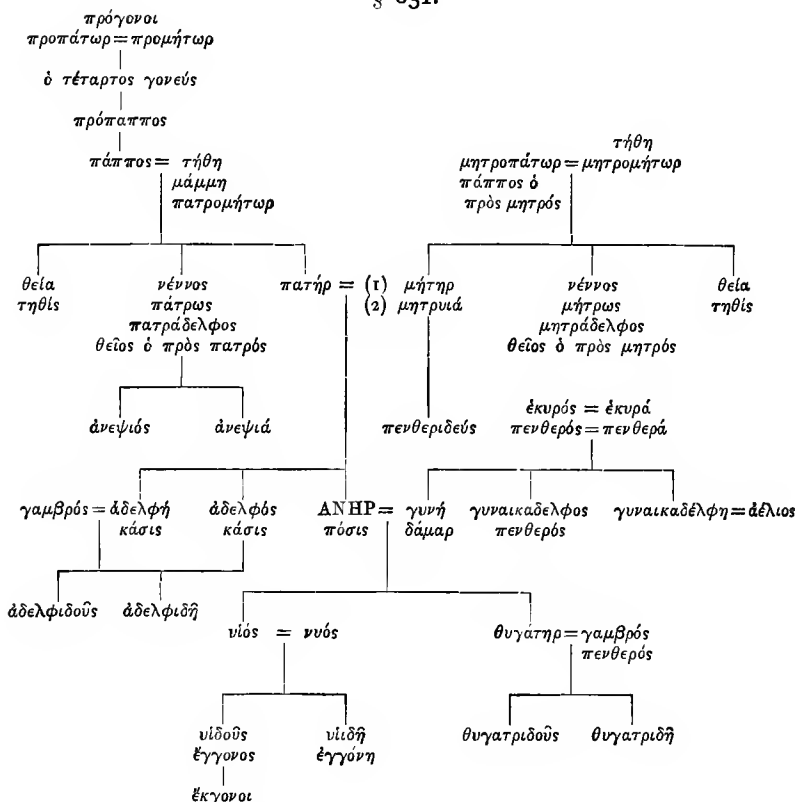
The chief modern authorities are A. Mommsen, *Das Kalenderwesen der Griechen*, 1883; G. F. Unger in Iwan v. Müller's *Handbuch*, 1886; Bibliography. and Schmidt u. Rühl, *Handbuch der griech. Chronologie*, 1888. The main outlines of the subject, given above, are undisputed: but endless difficulties arise in the details.

¹ It is obvious that the insertion of this month would disturb the sequence of 29 and 30 days for alternate months, so that the same month might be 'hollow' one year and 'full' the next; moreover, the intercalary month was itself sometimes nominally 'hollow,' though it contained 30 days (in which case one day was treated as intercalary).

VII. PRIVATE ANTIQUITIES.

VII. 1. A TABLE OF THE RELATIONSHIPS OF A MAN.

§ 631.



N.B. *μητριεύς* or *πατριεύς* *stepfather* is necessarily omitted from the above Table. *κασίγνητος* *brother*, *κασίγνητη* *sister*, and compounds of these (as *πατροκασίγνητος*) are also omitted. Some terms are doubtful: e.g. Pollux (*Onom.* III. 16. 22) restricts *νέννος* to the *mother's brother* or *mother's father*. (See Liddell & Scott, *s.v.*)

It will be observed that a man's relations by marriage seem to be called indiscriminately *πενθεροί* or *γαμβροί*, but usually in prose *πενθερός* means 'father-in-law' and *γαμβρός* 'son-in-law.'

A woman had some special terms of relationship, viz. *γάλως* *husband's sister*, *δαήρ* *husband's brother*, *ἐνάτηρ* *brother's wife* or *husband's brother's wife*. It does not appear that a man had any special name for his *brother's wife*.

VII. 2. RITUAL OF BIRTH, MARRIAGE, AND DEATH.

632. THE Greek woman was attended in child-birth by a midwife (*μαία*, *μαιεύτρια*) or a female slave, not by a doctor. The birth of a boy was advertised by the hanging of an olive wreath to the house door, of a girl—regarded as unlucky—by a woollen fillet. The newborn child was laid on the ground to gain strength by contact with Mother Earth and with its buried ancestors. The father, by lifting it up, acknowledged its legitimacy. The child was at once bathed in water or water mixed with oil or (at Sparta) with wine. It was then swaddled in swathing bands (*σπάργανα*), and laid in a *λίκνον* or winnowing basket for cradle. The usual head-gear of a child was a pointed cap, and it was customary to hang about its body *βασκάνια* or charms. As soon as practicable, *i.e.* on the fifth or seventh day, the first formal rite was performed, the *ἀμφιδρόμια*. House, mother and attendants were purified, and someone, probably the father, stripped of his clothes (*γυμνός*), ran round the hearth carrying the child, a rite intended to make the child walk and run quickly. The scholiast on Aristoph. *Lys.* 757 says that at the *ἀμφιδρόμια* the name was given, but this seems usually to have been postponed to the more public ceremonial of the tenth day (*δεκάτη*), to which relations and friends were bidden. On this occasion took place a sacrifice and feast, the guests brought presents (among them *σηπίαι* and *πλεκτάναι*, to give the child a good grip of things), and the father, if such was his intention, formally recognized the child. A male child frequently took the name of either paternal or maternal grandfather. Public opinion, except at Thebes, countenanced the occasional exposure (*ἔκθεσις*) of children. Mythological stories show that in heroic times it was not infrequent. Tokens for recognition (*γνωρίσματα*) seem sometimes to have been attached. The duties of a well-to-do mother were shared by a nurse (*τροφός*), sometimes by a wet-nurse (*τίτθη*), and the relation between child and nurse seems to have been close and enduring.

633. Marriage among the Greeks was arranged by the parents or near relations, often with the help of a match-maker (*προμνήστρια*). The necessary preliminary was the betrothal (*ἐγγύησις* or *ἐγγύη*), in which the woman was handed over by her *κύριος*, her nearest male blood-relation. If this ceremony were neglected or performed by the wrong person, the marriage was null and the children illegitimate. It was usual, though apparently not prescribed by law, that a dowry (*προίξ* or *φερνή*) should be settled on the wife, a very necessary arrangement in view of the great facilities for divorce. The meaning of the term *ἔδνα*, wedding-gifts, seems to have fluctuated, denoting in Homer gifts given by the husband for his wife, and later wedding presents given as now by the guests. The month most in favour for marriage was Gamelion, and certain days, *e.g.* the fourth day after the new moon, and the day of the

full moon, were regarded as specially lucky. As regards the actual ritual of marriage, the preliminary ceremonies to propitiate the gods (*προγάμια*) seem to have been separately performed by each family, and at no fixed date. Both bride and bridegroom propitiated the local gods (*θεοὶ ἐγχώριοι*) by some form of personal dedication, either by the offering of a lock of hair, or in the case of a river-god by bathing. The primitive meaning of the ceremony is placed beyond doubt by the formula in use among Trojan girls, *Δάβε μου, Σκάμανδρε, τὴν παρθενίαν*. The river-bath was later represented by the ante-nuptial bath in water brought from a sacred spring at Athens, Callirhoë. The vessel used was called the Bath-Carrier (*ἡ λουτροφόρος*), and sometimes appears in effigy in the graves of those who died unmarried. A sacrificial feast (*θοίνη γαμικὴ*) was given by the



Fig. 137. Carrying Likhnon in marriage procession, from a black-figured amphora.

bride's father, and probably at some other time another feast known as the *γαμηλία* was given by the father of the groom to his tribesmen. To this feast it was customary to subscribe (*γαμηλιαν εἰσφέρειν τοῖς φράτερι*). At the *θοίνη γαμικὴ* sacrifice was made to the household gods, and the sesame wedding-cake (*σησαμῆ*), made of pounded grain and honey, was eaten. Women were present with the bride, but sat apart. The bride was then taken home by the groom; she was veiled, and sat between the groom and his best man *παράνυμφος* or *πάροχος*, who drove the bridal chariot. She was accompanied by her mother, who bore torches lit at the father's hearth, and with them went a crowd of revellers and flute players. If we may judge from vase-paintings, the mother of the groom, bearing lighted torches, also awaited her at the door of her new home. In Boeotia the axle of the wedding chariot was burnt on the arrival of

the bride. If the groom was not married for the first time the *παράνυμφος* alone brought the bride. At her entry into her new home the bride was greeted with a shower of grain, fruit and sweetmeats (*καταχύσματα*), and Solon prescribed that within the bridal chamber she should eat a quince with the groom. At Athens it was the custom at marriages that a boy, both of whose parents were alive (*ἀμφιθαλής παῖς*), should carry a *λίκνον* (Fig. 137) full of loaves, and then pronounce the words, Bad I have fled, better have I found (*ἔφυγον κακόν, εὔρον ἄμεινον*). At Athens the priestess of Athena at some time not stated carried the aegis into the house of the newly married. Festal hymns had probably accompanied the whole ceremony, but the actual epithalamia were sung by the bridesmaids outside the bridal chamber, those sung in the evening being known as the *κατακοιμητικά*, those in the morning as the *διηγερτικά*.

634. After death the eyes and mouth were closed by the relatives, and the head veiled. The women of the family washed the dead man and anointed him, clothed him in white, decked Death and
burial. him with woollen fillets, and crowned him with flowers or vine-leaves. Aristophanes specially notes that the *ὀρίγανος* was in use. So decked he was ready for the *πρόθεσις*, or lying in state. He was placed on a couch, his face toward the door. In his mouth, where the Greek keeps his small change, was placed an obol, not originally as a fee for Charon (*ναῦλον*), but as a minimum precautionary sum for the dead man's use. Its connexion with Charon was a bit of popular myth-making, possibly due to the joke hazarded by Aristophanes. The honey cake (*μελιτόσσσα*) placed in the dead man's hand, originally the normal offering to the underworld gods, was later in like manner associated with Cerberus. An oil flask (*λήκυθος*) was placed at the dead man's head, and friends and relations gathered round to say farewell, while a dirge was sung by hired mourners (*θρηνησοί*). A vessel of water was placed at the house door, that each departing guest might purify himself from ceremonial uncleanness contracted by contact with the dead. On the day after the *πρόθεσις* took place the actual funeral, the *ἐκφορά*, which had to be finished before sunrise. At Athens no woman under sixty years of age might enter the room from which the dead man had just been removed unless she were one of the next of kin, a regulation obviously due to a desire to keep the dead man's soul, released by death, in the family. The same desire explains the regulation that women relatives should walk behind the bier in its passage to the grave, to catch the soul should it flutter away. The body was laid on a bier and borne either on a car or on the shoulders of friends; hired mourners and flute-players as well as friends and relations accompanied it to the grave. The ceremonies at the grave varied of course according as the body was buried or burnt. Cremation was practised by the Northern immigrants, the Achaeans, inhumation and occasionally embalmment in honey by the indigenous primitive population. Cremation is therefore the uniform practice in Homer, but inhumation reemerges in

classical times, *e.g.* in Æschylus. When the body was burned, a more expensive and tedious process, a pyre (πυρά) had to be erected; as the fire burned down, wine or water was poured on the ashes to extinguish them, and the bones and ashes of the body were collected in a vase (ὄστολόγιον). In the case of burial, as the grave was filled up friends and relations threw in vases, terracotta images and the like, not wholly out of sentiment, but from fear that the dead man, if not pacified, might return to claim his goods. Save in the case of a public funeral, we hear of no oration nor even of any spoken ritual, but the dead man was thrice saluted by name in a loud voice (τρὶς ἀνακαλεῖν, βοᾶν), and the funeral proper was over. The funeral company went straight back to the house of the nearest relative, where a feast (περίδειπνον) was given. On the third and ninth days sacrifices (ἐναγίσματα) were offered at the tomb (τρίτα, ἔνατα), and again on the dead man's birthday, and the anniversary of his death, also at the public festival of the νεκύσια, the All Souls' Day of the Greeks. The dead man became a chthonic δαίμων, potent for good or evil. His natural symbol as such, often figured on tombs, was the snake. Regulations about suicides and unnatural criminals, *e.g.* fratricides, were based, then as now, on the belief that they were potential vampires, and must so far as possible be incapacitated. The fear of the vampire-revenant grew with the practice of burial in place of burning.

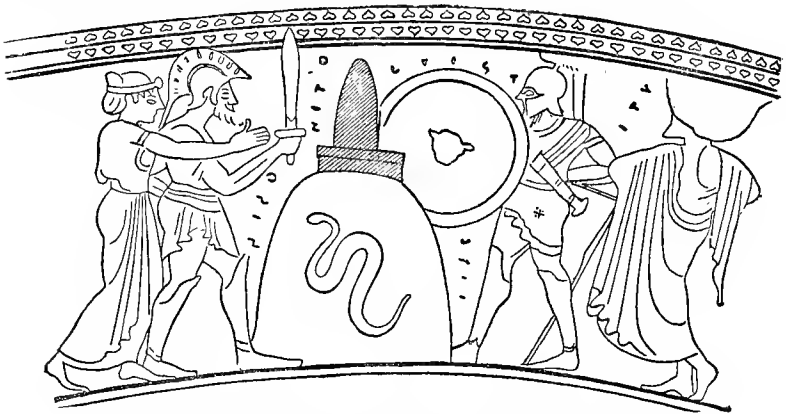


Fig. 138. Scene at grave-mound surmounted by a stele, from a black-figured lekythos in the Naples Museum.

635. The funeral monument was ordinarily a mound (τύμβος) or simple slab (στήλη), or column (κίων) to mark the place of burial (Fig. 138). Occasionally it took the form of a hero chapel (ἡρώων).

Funeral monument.

Primarily, no doubt, the dead man was buried within his own family precinct; later the custom arose of burying the

dead by the sides of public roads. The inscription was ordinarily just so much as was needed for identification, *i.e.* the name, father's name, deme. At Sicyon no more than the dead man's name and that of his father appear; at Sparta even the name was forbidden. In later days eulogistic verses came into fashion, and the salutation $\chi\alpha\iota\rho\epsilon$, and when faith declined and sacrilege was dreaded, elaborate curses are invoked on the intruder. When sculpture is used to adorn the tomb, the subjects represented are usually simple scenes of human life, but cast in somewhat hieratic mould; not unfrequently a mourning Siren is sculptured on a tomb; otherwise, save for the occasional appearance of Hermes Psychopompus, mythology is conspicuously absent. Cenotaphs were erected for those whose bodies had disappeared, and over the grave of a murdered man a spear was set up and watched by relations for three days.

Greek mourning usually prescribed black garments and close shaven hair; at Argos white was worn. It was customary then as now to observe a certain amount of seclusion during the period of mourning. This varied in various places; at Sparta it was only twelve days, at Athens and Argos thirty.

Pauly-Wissowa, *Real-Encyclopädie*, sub *voc.* ἀμφιδρόμια, etc. for Classical references; F. B. Jevons, 'Greek Burial Laws and Folklore Customs,' *Classical Review*, June, 1895, p. 247, for theories as to the origin of ritual and for many details; Ridgeway, *Early Age of Greece*, 1901, Chap. VII. 'Inhumation, Cremation and the Soul'; Harrison and Verrall, *Mythology and Monuments of Ancient Athens*, 1890, sec. D; Harrison, *Prolegomena to the Study of Greek Religion*, 1903, Chapter VII.; E. Samter, *Geburt, Hochzeit, Tod*, Leipzig, 1911; A. Dieterich, *Mutter Erde*, Leipzig, 1905.

Bibliography.

VII. 3. EDUCATION.

636. FOR the time of Homer we have only slight glimpses at the methods and aims of the training of children. Phoenix, we learn, taught Achilles $\mu\acute{\upsilon}\theta\omega\nu\ \tau\epsilon\ \rho\eta\tau\eta\rho\prime\ \xi\mu\epsilon\nu\alpha\iota\ \pi\rho\eta\kappa\tau\eta\rho\acute{\alpha}\ \tau\epsilon\ \xi\rho\gamma\omega\nu$, from which we see that the power of effective speech was even then made an object of education. But for the most part the intellectual training was limited to the use of the lyre and to singing. Dancing, wrestling, swimming and other athletic exercises were practised, but no hint is given as to any general teaching of them. The education of the boy in morals and religion was doubtless given by the father, and mainly by his example: while the girl learnt her household duties and the rules for her conduct in daily life from her mother. The first trace of any educational institutions is to be found in Crete, where *gymnasia* existed at a comparatively early date, and are said to have been maintained by the State. But these were not intended for youths under

Homer,
Crete and
Sparta.

seventeen years of age (Hesych. *s.v.* ἀπάγελαι); up to that time they learnt at home reading, music and the laws of their country; it was only when they were taken from their parents' care, and placed under military discipline in ἀγέλαι, that the State training began: and though it included music and dancing, the aim was simply to make them the better soldiers. The same may be said of the famous Spartan discipline. The greatest care was taken to train boys in hardihood, and in skill in the use of weapons, as well as in obedience and good discipline. They perhaps learnt to read, and certainly were taught music and singing: but on the whole it was a physical and moral, not an intellectual, training which was given to the young Spartans.

637. Schools, in the modern sense, appear first in the Ionian colonies of the islands and of Asia Minor, where first the use of writing for literary purposes became general. Herodotus (vi. 27) tells us of a school at Chios, the roof of which fell in shortly before the battle of Lade (494 B.C.), crushing all but one of the 120 pupils who were assembled in it. A year or two earlier a similar mishap befell a school in the island of Astypalaea. Laws for the regulation of schools are ascribed to Solon (Aeschines *Tim.* §§ 9—11), and if these are genuine, schools must have existed at Athens early in the sixth century. The general prosperity which followed the Persian wars must have given them a large extension. But it is only at a later date that we find any traces of either State support or private endowment. The earliest instance of the former is when during the Persian occupation of Athens, the Troezenians, who had given shelter to the Athenian women and children, resolved that the latter should carry on their education in the schools of the town at the public cost. Later on we find endowment quite common: *e.g.* at Rhodes in 162 B.C. the State accepted a large donation of corn from Eumenes, 'that its value might be invested, and the interest devoted to pay the fees of the tutors and schoolmasters of their sons,' for which Polybius rather sharply censures them: and an inscription of the first century at Teos shows that there were there three salaried teachers of literature, two of gymnastics, and one of music, whose income was in part at least provided by endowment. But at Athens schools were entirely 'private ventures.' Nor was there any State control other than that secured by the laws. In some Dorian States there were officers called παιδονόμοι, who were charged with the oversight of the training of boys: but probably they did not concern themselves with anything but the gymnastic exercises. We read in Plato (*Crit.* 50) that the laws required parents to train their children in 'music' and 'gymnastics,' but we have no knowledge how these laws were enforced. Apparently the court of Areopagus had a general power of supervision, in the days when its functions were unrestricted. After the reforms of Ephialtes, it is probable that the Sophronistae, whom we find afterwards charged with educational duties, took up this office. Naturally the character of the schools varied greatly. Demosthenes taunts Aeschines with having been an assistant in a

school of no repute, kept by his father, where he discharged the humblest and most menial functions, while he himself had been going εἰς τὰ προσήκοντα διδασκαλεία.

638. Up to the age of seven years children remained at home under the charge of their mother, or, in well-to-do houses, of a nurse (τροφός), who was almost invariably a slave. From her lips they would learn stories of the gods and heroes, and fables of animals; and sometimes tales of ghosts and hobgoblins, such as those which aroused the disapproval of Plato, to scare them into good behaviour. Healthy occupation was found for their restless activity in many kinds of games, most of them such as are still familiar to our nurseries:—the rattle (πλαταγή or κρόταλον), an invention of the philosopher Archytas, 'in order that having the use of this, they may not break any of the things in the house, for little creatures cannot keep still' (Arist. *Pol.* v. 6. 2), toy carts, boats, beds, tables, cooking utensils, dolls of clay and wax, and dolls' houses. Other recorded games were perhaps better suited to a later age, such as ball-playing (σφαῖρα), the hoop (τροχός), top (ρόμβος), and swing (αἰώρα); blind man's buff (χαλκῆ μύια), the tug of war (ἐλκυστίνδα), and many others. Especial favourites were knuckle-bones (ἀστράγαλοι), and jumping or standing on an inflated and well-greased wine-skin (ἀσκωλιασμός).

Home training of children: games.

639. The girls continued to receive at home such training as was thought needful, which doubtless varied greatly in different cases. There are certainly instances in which Athenian women knew how to read and write: and there is a charming terra-cotta (not, it is true, of Athenian origin) which represents a girl seated on her mother's knee and learning from a roll which she holds. Probably too they learnt dancing: music seems more doubtful among those of good repute: and few had any kind of intellectual training. The newly-wedded wife of Ischomachus in Xenophon's *Oeconomicus* knows nothing but the labours of the loom, and habits of temperance, modesty and teachableness. She has been trained 'to see, to hear, and to ask as little as possible.' And when her husband takes her education in hand, it is limited to the duties of a good housewife. It was one of the boldest of Plato's proposals that women should have the same training as men (*Rep.* v. 451 f.). Teos is the only place where girls are spoken of as going to school along with boys, and even there the education of the former ceased at an early stage. In some Dorian States the girls were allowed to take part in gymnastic exercises and contests. In Sparta the girls were thoroughly trained in athletic exercises, especially in dancing, running and wrestling; and whether they practised entirely naked, as some authorities imply, or only lightly clad in the short *chiton*, as seems more probable, their freedom is in striking contrast to the seclusion usual in most Greek States. But the testimony, not only to the splendid vigour and beauty of the Spartan women, but also to their high tone of morality and their influence in the

Education of girls.

State, proves that the perilous experiment under the existing conditions was by no means unsuccessful.

640. As soon as the boys were too old to be managed by their mothers or the nurses, they were placed under the care of *παιδαγωγοί*.
 The pedagogue. These were invariably slaves, and too often slaves who were unfit from age or some physical defect for ordinary work.

But though often rude and boorish (if we may argue from the way in which they are usually depicted in works of Art), they were, so far as possible, of high and trustworthy character. Their main duty was to look after the morals of the children. They kept them under constant supervision; taught them what was becoming in eating, drinking, dress, bearing and general behaviour; and corrected faults, at times with considerable severity. They regularly accompanied the boys to school, but took no part in the teaching. It is commonly said that they waited during the hours of lessons in a room called *παιδαγωγεῖον*. The principal objections to this view, which is strongly supported by the derivation of the word, are (1) that the school kept by the father of Aeschines, with reference to which we find this term used, was not one likely to have had anything but the barest necessities; and (2) that on vases and the like *παιδαγωγοί* are depicted as present in the schoolroom itself.

641. The purpose of education, especially in the earlier time, was not to stimulate or gratify intellectual curiosity, but to develop in the future citizen the physical, mental, and moral excellence which might fit him to do good service to the State. The religious element was, to our notion, singularly lacking: but it was to some extent provided, partly by the religious observances of the time, partly by the frequent public festivals in honour of the various deities, and mainly, so far as definite beliefs were concerned, by the study of the national poetry, especially the hymns. The two main branches of education were *γυμναστική* and *μουσική*. Plato lays it down that boys should begin with the former: but we have no definite information how far this was usual in practice. There are indications that they went on to some extent side by side, the latter naturally occupying the earlier part of the day, while the later hours were given to physical recreation. Gymnastics were taught by a *παιδοτρέβης*, in a *παλαίστρα*. There has been much discussion as to the precise distinction between a *γυμνάσιον* and a *παλαίστρα*: but two facts are clear. The term *γυμνάσιον* is never used with reference to education, until a very late date: and a *παλαίστρα* is often found as a term for a part of a *γυμνάσιον*. Hence it is safe to say that a *παλαίστρα* is either a training school for boys, or that part of a gymnasium specially devoted to wrestling (*παλαίειν*) and boxing. In the former sense it commonly bore the name of the owner or the original builder. The palaestra was an enclosed place, if possible near a running stream, and open to the air, that boys might be accustomed to bear the heat of the sun: *ἑσκιατραφικώς*, like the Latin *umbratilis*, was a term of

disparagement, as contrasted with ἡλιωμένος. In wrestling, skill and suppleness of limb were of not less importance than strength: and all kinds of tricks were encouraged (e.g. ὑποσκελίζειν): but we can hardly believe that the ferocious practices which marked some contests (λυγίζειν, τραχηλίζειν, ἄγχειν, ἐκκλᾶν τὸν δάκτυλον) were permitted to boys. In the πάλη ὀρθή a wrestler was vanquished if he was thrown thrice by his opponent (cp. Aesch. *Eum.* 589 ἐν μὲν τόδ' ἤδη τῶν τριῶν παλαισμάτων): in the ἀλίνδησις or κύλισις the struggle was continued, as the wrestlers lay on the ground, until one confessed himself beaten. Boys wrestled naked, having first anointed themselves with oil, sprinkled with sand. After the contest, the oil, dust and sweat were scraped off with a σπλεγγίς (*strigil*), and a cold bath was commonly taken, in the form of a plunge and a swim, if a river was near. Warm baths (βαλανεΐα) were not unknown, especially in the luxurious Ionian towns; but they were always looked upon with some disfavour (Ar. *Nub.* 991). Next in importance to wrestling was running. We learn that at Olympia boys were only allowed to contend in the short race, a single course of the στάδιον (about 200 yards): it is probable therefore that school training was limited to this: and the distance may have been further graduated according to age. Leaping, both the high and the broad jump, with and without a run, and usually with the aid of weights (ἄλτηρες), throwing the quoit (δισκοβολία) and the spear (ἀκοντισμός) were also practised. As to the place of boxing in the training of boys, we have little information; but as there was a prize for boxing open to boys at Olympia as early as 616 B.C., it was probably not neglected, though it could hardly have held a prominent place.

642. In μουσική the first stage was the study of γράμματα, i.e. reading and writing, under the γραμματιστής. Dionysius of Halicarnassus (*De Comp. Verb.* c. 25) gives the following Reading and writing. account of the method pursued in his time (1st cent. A.D.) 'First we learn the names of the elements of speech (στοιχεῖα τῆς φωνῆς), that is the γράμματα, then their several forms and values (τύπους καὶ δυνάμεις), the syllables and their modifications (τὰ περὶ ταῦτα πάθη), and finally names (δνόματα) and verbs (ῥήματα), and connecting particles (συνδέσμοις) and the changes which they undergo (τὰ συμβεβηκότα τούτοις), contractions, expansions, acute or grave pronunciation, cases, numbers, inflexions, and the like. Then we begin to read and to write, at first syllable by syllable, very slowly, and the more rapidly, as we acquire some familiarity.' Some have supposed that Dionysius here describes the method of acquiring the power of reading, not by learning the names of the letters first, but by learning their powers, so combining them at once into syllables. But this is hardly consistent with his language, and is directly contradicted by a passage in Athenaeus, which tells how there was a kind of chant used in schools:—βῆτα ἄλφα βα, βῆτα εἰ βε, etc. A terracotta plate found in Attica, doubtless intended for use in schools, contains a number of syllables αρ βαρ γαρ δαρ ερ βερ γερ δερ κτλ. The

study of grammar which Dionysius describes was of course common only at a later date, when the Sophists had brought this into fashion. In learning writing the pupil had to follow lines (*γραμμαί*) drawn by his master with a *stilus* on a tablet: it seems to be uncertain whether these were straight lines drawn to regulate the size and evenness of the letters as in our copy-books, or letters to be traced over by him. The former is the more natural meaning for *γραμμαί*, but the latter course was known to and approved by Quintilian (I. 1, 27). For writing they used at first boxwood tablets (*πυξία*) covered with wax, on which letters were scratched with a *stilus* (*γραφίς* or *γραφίδιον*, not *στῦλος*): afterwards papyrus was employed, with a reed pen (*κάλαμος*) and ink (*μέλαν*). Tables or desks were never used in schools: the tablet or paper was rested on the knees, as is usual still in the East.

643. Whether arithmetic was taught in the schools, as Plato would have it taught in his ideal State (*Laws* VII. 819), seems doubtful. It was never regarded as a part of *παιδεία*, but probably from its practical value it was not wholly neglected. Reckoning on the fingers (*ἐπὶ δακτύλων συμβάλλεσθαι, πεμπάζειν*) or with the help of pebbles (*ἀπὸ ψήφων λογίσασθαι*) or an *abacus* (*ἀβάκιον*) may have been picked up at home, or as part of the ordinary business of life. Later on, when the educational value of mathematics was better understood, and when the training of children was less exclusively directed to the development of character, some elementary teaching of arithmetic and geometry became usual: but we cannot say whether this was given by the *γραμματιστής*, or by a special teacher. We learn that drawing (*γραφικὴ*) was made a school subject, and to some extent combined with mathematics, first by Pamphilus, the head of the Sicyonian school of painting, early in the fourth century (Plin. *H. N.* xxxv. 76 f.). The purpose of teaching it was partly to train the eyes to the appreciation of beauty, partly to help in judging works of Art, that, as Aristotle rather quaintly puts it (*Pol.* v. 3. 7), they might not be cheated in the purchase and sale of household goods.

644. Plato allows three years for the mastery of the rudiments of reading and writing, but doubtless before this was completely achieved boys began the study of the poets. At first this consisted mainly in learning verses by heart, and we find on vases pictures of boys standing before the teacher, who is seated, and who reads from a roll. Afterwards the matter was more carefully explained, and the poets served as manuals, not only for mythology and for morals, but also for geography and history. The chief text-book was Homer: it was not uncommon for Athenian boys to know the whole of the *Iliad* and the *Odyssey* by heart. Hesiod and the cyclic poets were also studied; and the gnomic poets, Theognis, Solon, Mimnermus and Phocylides, as well as the lyric poets like Tyrtaeus were learnt, mainly in selections and chrestomathies. We have a very interesting specimen of the illustrations used in teaching poets in the *tabula Iliaca* of Theodorus, now preserved in the

Capitoline Museum at Rome, which contains scenes from the *Iliad*, with brief descriptions appended.

645. For μουσική in the narrower sense there was usually a special teacher called κιθαριστής, though there are instances of the same master teaching both γραμματική and μουσική. Boys were taught at the same time to play on the lyre and to sing. The instrument used was commonly the simpler λύρα, not the more elaborate κιθάρα preferred by professional musicians. The pipe (αὔλος) was not unknown in schools, as we see from the instructive representation of a school in the famous vase of Duris (Fig. 139); but it was in fashion at



Fig. 139. Vase-painting by Duris, on a cylix.

Athens only for a short time after the Persian wars, though it was always much used in Boeotia. It naturally could not be played by a singer: it was supposed to disfigure the face, and its music was thought to be unduly exciting. Music was studied partly as a graceful accomplishment for hours

of leisure, partly as adding pleasure to festive gatherings, at which everyone was expected to play and sing in his turn, but especially for its influence upon the temper and character. The Greeks always attached immense importance to the moral effect of music, and distinguished the influence of the various keys or modes in a manner which our ignorance of the exact nature of Greek music precludes us from realising or appreciating very clearly. The Dorian mode, for example, was regarded as moral and manly, the Lydian as effeminate, the Phrygian as orgiastic, the Ionic (a subdivision of the Phrygian) as suited only for drinking-songs. Such of the Greek tunes as have come down to us seem to our modern ears very unattractive. Undoubtedly the training in singing would be accompanied by a careful study of rhythm and metre, and also of pronunciation, in the widest sense, including *τόνος*, *πνέσμα*, and *χρόνος*. Also the language of the lyric poets would suggest more thorough instruction in poetic diction and dialect, as well as in a wider range of mythology and history.

646. At the age of fifteen or sixteen *γυμναστική* claimed a greater part of the time of the pupil, though the attention which he continued to give to *μουσική* would doubtless depend upon his own tastes and the social position of his parents. The earlier gymnastic exercises were probably (as Aristotle held that they should be) light and easy, such as might develop the grace and vigour of the body, without putting too great a strain on it. But three years or so after the date of puberty the time came for more severe training, both in diet and in exercises. Yet the wisest teachers always drew a sharp line between the training which made men vigorous and brave soldiers, and that which led to professional athleticism. The term 'trainer' (*παιδοτριβής*) came to be distinguished in the later time from that of 'teacher,' and his profession was less esteemed. The difficulty of carrying out high intellectual training along with excessive physical exertion was recognised, and the brutalising effects of pure athleticism deplored (§ 422). Dancing was apparently but little practised by any but those who were in training for the chorus at public festivals. It was more general perhaps in the case of girls; and at Sparta it was usual for all, especially in the form of the warlike Pyrrhic dance.

647. A wide extension was given to the traditional basis of education by the influence of the Sophists. The common feature of this class of teachers, widely as they differ in many respects, was a dissatisfaction with the narrow limits of the ordinary culture, especially as failing to satisfy the demands of a legitimate intellectual curiosity. They offered, to all who cared to pay their fees, instruction in subjects either entirely new, or largely developed by their efforts. Protagoras, for instance, taught systematic grammar, and correctness of diction (*ὀρθοέπεια*), Prodicus the distinction of synonyms, Hippias the rules of rhythm. Generally speaking, dialectics and rhetoric (as developed by Gorgias), the elements of physical science, mathematics and philosophy

were the subjects which attracted students of leisure from all parts of the civilised world to Athens. But our limits prevent us from dealing with these higher and purely voluntary studies. It is only needful to observe how the extension which they gained must have had its influence on the range and method of the work of the ordinary schools, so that we have to be careful in applying the abundant information which we have as to the first and second centuries after Christ to the fifth and fourth centuries B.C.

648. It may, however, be worth while to notice the origin of what has been called 'University life at Athens.' From seven to eighteen years of age, a boy learnt at Athens what his father's wishes or means prescribed for him. But at the latter age the State took the control of him for a period of two years. We learn about the institution of *ἐφηβεία* mainly from inscriptions (§ 750), and from *Ar. Pol. Ath.* c. 42. It was probably instituted in the year 336 B.C.; the earliest inscription dealing with *ἐφηβοί* dates from 334—3 B.C. At first it was purely a military organisation. All sons of citizens at eighteen years of age, after passing a *δοκιμασία*, were placed under the charge of *σωφρονισταί* and *κοσμηταί*, and trained to military duties. They were maintained at the public cost, and wore a uniform dress (at first dark, or even black, afterwards white): for the first year they served as a garrison to Munychia or the Acte of the Peiraeus: in the second, after receiving a shield and a spear from the State, they patrolled the country or garrisoned the forts. By degrees the service seems to have become voluntary; the recorded numbers greatly diminish, and finally strangers are admitted. Naturally it became more and more restricted to the rich, and the age of entrance was not definitely fixed. In the third and following centuries before Christ the military and gymnastic exercises are supplemented, and the former ultimately replaced, by elaborate courses in literature, rhetoric and philosophy; and at the same time the regular period of study is limited to one year. The professors, on whose lectures attendance was compulsory, were not paid or appointed by the State: they were probably selected by the officials, and remunerated by the fees of their students. There were numerous students' clubs and reunions, and a common library in the Ptolemaeum, a fragment of the catalogue of which still exists. Of course the attendance on lectures was not restricted to the Ephebi: from all quarters students came to complete their education at what thus became the premier University of the Roman Empire.

Grasberger's *Erziehung und Unterricht im klassischen Alterthume* (Würzburg, 3 vols., 1864—81) is a complete storehouse of information. Cp. also P. Girard, *L'Éducation Athénienne* (Paris, 2nd ed. 1891), and his articles *Education* and *Ephebi* in Daremberg and Saglio's *Dict.*; also Becker-Göll, *Charikles* II. 19—83 and 213—50 (Berlin, 1877); J. L. Ussing, *Erziehung und Jugendunterricht bei den Griechen und Römern* (Berlin, 1885); J. P. Mahaffy, *Old Greek Education* (London, 1881); K. J. Freeman, *Schools of Hellas* (London, 1907, etc.); E. Ziebarth, *Aus dem griechischen Schulwesen* (Leipzig, 1909); J. Oehler, *Epigraphische Beiträge zur Geschichte der Bildung im klassischen Altertum* (Wien, 1909).

The Ephebi.

Bibliography.

VII. 4. BOOKS AND WRITING.

649. THE vehicle by which Greek literature was preserved and transmitted from the earliest times until perhaps the second or third century after Christ was the papyrus roll. Alike in respect of form and of material, this was an import from Egypt, where it had been in use from a very remote time. A detailed account of the way in which the papyrus was treated in the Egyptian paper-factories is given by Pliny (*N. H.* XIII. 74 sqq.), but it is obscure in many points, and has given rise to a great deal of discussion. Without going into the minuter details of the process, it may be said here that the material used was the pith of the papyrus-reed (*πάπυρος, βύβλος, βίβλος*: botanically *Cyperus papyrus*), cut vertically into slices. In order to make a sheet of paper, these slices were laid some vertically and others transversely, pressed together, and dried in the sun: unevennesses were then smoothed or pressed away, and the sheets glued together into a roll. The writing was arranged in columns, in which the lines of writing ran parallel to the long side of the roll. Only one side of the paper was used in books meant for sale. Those written upon both sides (*δπισθόγραφα*) were for private use, and were in the nature of rough copies. In order to read a roll, it, or rather the wooden cylinder on which it was wound, must be taken in the right hand. It was then opened with the left hand, and the reader began with the first column: as he proceeded further and further towards the right, he rolled up with his left hand the portion he had now read.

The length of the early rolls was very considerable. We are told of some that were 150 feet long, and would contain the whole *Iliad* or *Odyssey*. Clearly this great bulk must have been a grave inconvenience, and we have evidence that the discomfort of it was felt. The well-known saying of Callimachus—*μέγα βιβλίον μέγα κακόν*—alludes to this matter and to nothing else. Callimachus was speaking, not as a poet or as a literary critic, but as librarian of the great Alexandrian library, whose contents and catalogue he arranged. He must have had to deal with enormous masses of the unwieldy old rolls, and have suffered as much as we do now from a large folio book without an index. The theory of Birt is that we owe to Callimachus in a great measure the subdivision of ancient Greek works into *books*. It is at least clear that from a fairly early period authors were influenced by the size of the papyrus rolls ordinarily manufactured, and divided their works into such portions as could conveniently be contained in single rolls. The manufacture of papyrus had its head-quarters at Alexandria, and all matters relating to its size, quality, and price were carefully regulated in Roman times. In Pliny's day the standard quantity of a roll was twenty sheets. The best quality of paper (at first called *hieratica*, but

subsequently *Augusta*) was about $9\frac{1}{2}$ inches wide, though there was a kind of 'large paper' (*macrocollum*) as much as a cubit wide. The inferior sorts decreased in width, down to about five inches. It should be borne in mind that the slices of pith from the *centre* of the papyrus stalk were alike the largest in size and the best in quality. The papyrus-trade was carried on by the Arabs after their invasion of Egypt in the seventh century A.D., and ceased altogether, it is believed, about the year 950.

650. Side by side with papyrus, another material was in use for several centuries, which was destined entirely to supersede its older rival. This was parchment (*pergamena*) or vellum (*vitulinum*). Parchment. Rolls of skin were used by the Egyptians in quite early times, though rarely in comparison with papyrus: and the Jews probably employed skins throughout their history for the reception of their sacred books, as indeed they do at the present day. Herodotus, too, tells us that the Ionian Greeks wrote upon skins (*διφθέραι*), and Diodorus Siculus speaks of the *διφθέραι* on which the ancient records of Persia were inscribed. The place which has given its name to parchment—Pergamum—was in later classical times the centre of the parchment trade. Pliny quotes from Varro a story that Eumenes II, king of Pergamum (197—158 B.C.), was forced to use parchment for his library because the Ptolemies, jealous for their own library at Alexandria, forbade papyrus to be exported. The story is not generally believed, but it contains the truth that Pergamum was particularly important in connexion with the development of the use of parchment. From Pergamum the article must soon have made its way in some quantity to Rome; and once at Rome, its diffusion over the whole civilised world was assured. Its superiority to papyrus consisted, firstly in its greater durability, and secondly in the fact that it was procurable in any country, while the papyrus-reed could only be cultivated in one very limited area. For all that, it did not make its way to the front at once. We have no clear evidence as to the comparative value of the two materials. At least we know what the determining influence was which eventually gave to parchment its well-deserved supremacy. It was that of the Christian Church, which, influenced no doubt by the practice of the Jewish Church, chose parchment to write their sacred books upon. As was natural, the Christians soon extended its use, first to the reception of their own theological literature, and then to that of literature in general.

651. The form of the earliest parchment mss. was naturally that of the roll. We have now to consider the development of the book-form; an improvement almost comparable in importance to the invention of printing. Development of the Book. It is agreed that the book was evolved out of the *tablet*. Single wooden tablets were used in Egypt and in Greece as early as the fifth century B.C., for such purposes as the keeping of accounts, and the writing of models for schoolboys to copy. These tablets were of plain wood, or had a thin coat of glaze. But the more important and more usual form which they took in the Greek and Roman

world was that of the set of small tablets which could be carried on the person, and were used for notes and correspondence, or for wills and other legal documents. These were usually of box-wood, covered with wax, on which men wrote with a metal stylus: they were hinged together with rings, and according as they consisted of two or more 'leaves,' they were described as *δίπτυχα*, *τρίπτυχα*, etc., or *πολύπτυχα*.

Take such a set of tablets, and for the inner leaves of wood substitute leaves of papyrus or of parchment, and you have at once something very like the modern book. Let the further step be taken of using a book so formed for the purpose of transcribing some short literary work, and the thing is done. The size and bulk of your book can be increased at will. How much more convenient for continuous reading, and more especially for reference, a book is than a roll we do not need to be told: but in the ancient world natural conservatism and the traditions of the book-trade were not overcome at once. Towards the end of the third century A.D. the supremacy of the book-form was probably assured if not attained. There were books before that date, and rolls continued to be used for literary works long afterwards: but the former were on the increase and the latter falling off in numbers.

The earliest extant specimens of books must be looked for among recent Egyptian discoveries. The third-century papyrus-leaf, containing the 'Sayings of the Lord,' is from a book, not a roll: while a parchment leaf with a fragment of the *Melanippe* of Euripides is of the fourth century or earlier. Of complete books it would not be easy to find earlier examples than the two fourth-century Bibles, known as the *Vaticanus* and *Sinaiticus*.

Alike in books and in rolls the writing was arranged in columns. The reader of a roll would probably find it convenient to have from two to four columns exposed before him at once. Some of our earliest books bear traces of their descent from the roll in the number of columns which each of their pages shows. Thus the two famous Bibles mentioned above have respectively four and three columns on a page. The normal number, however, in MSS. where the lines are of uniform length, is two. Where they are sense-lines—divided, as the phrase goes, *per cola et commata*, as in the *Codex Bezae*—we find but one column on the page. The columns were in Greek called *σελίδες*—a word which originally meant the gangways between the banks of rowers in a trireme. This was transferred to the spaces between the columns of writing, then to the columns themselves, and finally, when the book-form had ousted the roll, to the pages of the book itself. Greek papyrus books have not survived outside Egypt save in scanty fragments.

652. The arrangement of the leaves of ancient MSS. is often important.

Quires of a Book.

The construction of the earliest books was essentially the same as that of the most modern ones. They were composed of a series of quires fastened together, and each quire

consisted of a number of sheets of vellum or papyrus, folded down the middle and placed one inside another. The most usual number of sheets composing a quire was four, which made eight leaves or sixteen pages, and was called a τετραδίον or *quaternus* (= *cahier* = quire). We also find quires of six, ten, and twelve leaves. The number of leaves of which a quire consists is ascertained by looking between each pair of leaves until a string is found passing down the middle of the crease between them. The sheet in which this string is must be the innermost sheet of the quire, and there ought to be an equal number of leaves on each side of it. If there is not, the reason must be either that a leaf in the quire was cancelled and cut out by the original scribe, or that it has been subsequently lost. We can best find out which is the true reason by noticing whether the text of the ms. is continuous throughout the quire. If a gap in the sense appears between one leaf and the next, we shall be sure that we are dealing with a case of mutilation.

653. We are familiar with the fact that Egyptian works, notably the *Book of the Dead*, were copiously illustrated. But we have no evidence that the Greeks adopted this fashion in early times. The first Greek ms. which is illustrated in any way is a papyrus of the astronomical τέχνη of Eudoxus, now at Paris, dating from 165 B.C. It contains some rude diagrams. Our earliest specimen of real pictures in Greek books is afforded by the illustrated fragments of the *Iliad* in the Ambrosian Library at Milan. These are 58 pictures cut from a complete ms. of the *Iliad*. They are themselves as old as the fourth century, and go back to yet earlier models. The Vienna Dioscorides of the sixth century preserves a remarkable series of pictures of plants and other illustrations.

Illustration
of Books.

654. As to the writing materials ordinarily used by scribes, something must be said. A number of epigrams in the Palatine Anthology (vi. 62—68, 295), mostly late, but all variations on an ancient theme, give lists of the implements in question. They are as follows :

Writing
materials.

(1) The μόλιβδος, a disc of lead with which lines were ruled; (2) κανών, the ruler which served to keep the lines and columns straight; (3) σπόγγος, the sponge to obliterate mistakes; (4) κίσσηρις, the piece of pumice to smooth the nib of the pen, and to rub away roughnesses in the paper; (5) γλύφανον or σμίλη, the penknife to sharpen the pen; (6) μέλαν, the ink, either that of the cuttle-fish, or else a mixture made from oak-galls or the like; (7) μελανδόκον (μελανδοχείον, etc.), the inkstand; (8) κάλαμος, the pen, which, as the name shows, was at first a reed, later on exchanged for a bird's quill. We first hear of the latter in the sixth century, but no doubt it was in use before that. The metal stylus was only employed for writing on wax tablets. It is perhaps worth while to add the term ὀμφαλός, which was the name given to the projecting ends—often gilt and decorated—of the cylinder on which a papyrus volume was rolled.

655. As to the methods of storing books, we are not perhaps so well informed as we are about the books themselves. It is clear alike from literature and from monuments that the small collection of an ordinary individual would be contained in a series of circular boxes in which the rolls stood vertically. Reference to them was rendered easy by the *σίλλυβος*, or label of coloured parchment or other material, attached to the *ὄμφαλός* of each, on which the title was written. Larger libraries, such as that found in 1752 at Herculaneum, required to be accommodated in presses, usually shallow cupboards arranged round the walls of a room. In these the rolls would lie horizontally on the shelves. Each press or series of presses would have to be provided with a catalogue. Callimachus is known to have compiled what are called *πίνακες* for the Library of Alexandria; the work was clearly in the nature of a catalogue; and the most probable interpretation is that the catalogue there and elsewhere took the form of a number of wooden tablets, one for each press, inscribed with the titles of the books contained in that press. The Greek names for the book-boxes or book-cupboards are not of very common occurrence. The word *βιβλιοθήκη* must have originally meant a receptacle for a small number of books, though its meaning was speedily extended, and *κιβωτός* and *τεῦχος* had also this signification: the things themselves, however, took firm root at Rome, and survived into later mediaeval times throughout the West. Of the book-trade in Greece, again, and of the methods which an author employed to get his works published, we really know nothing. Judging from what went on at Rome, we should conjecture that the trade was carried on by men who employed slaves to write from dictation, and that in this way copies of books were quickly multiplied. From a passage in Xenophon's *Anabasis* (VII. 5. 14) we gather that there was an export trade in books from Athens, and that they were packed in wooden boxes for the purpose.

Th. Birt, *Das antike Buchwesen; Buch und Rolle*; W. Wattenbach, *Das Schriftwesen im Mittelalter*; J. W. Clark, *The Care of Books*; F. G. Kenyon, *The Palaeography of Greek Papyri*; Sir E. M. Thompson, *Manual of Greek and Latin Palaeography*.

VII. 5. THE POSITION OF WOMEN.

656. THE position of women in Greece varied, at different periods and in different States, from a condition of dignity and honour almost equal with men, to one of subjection and seclusion somewhat resembling that existing among Oriental nations. The earliest notices of Greek women are found in Homer. Both in the *Iliad* and in the *Odyssey* the wives and daughters of chieftains are treated with respect, and have much freedom of intercourse with men. Helen,

Women in
Homer.

attended by her two ἀμφίπολοι, goes openly through the streets of Troy, admired by all who meet her. Penelope holds court at Ithaca in the absence of her husband, and is respected even by the insolent wooers, who do as they will with the slaves of the household. It appears to be understood that though Telemachus acts as his mother's guardian, the sovereignty of Ithaca will pass to the suitor whom she accepts (as also in the case of Clytaemnestra). Nausicaa, daughter of the Phaeacian king, goes through the city with only her handmaids attending her, and her behaviour to Odysseus is a pattern of maidenly courtesy. No nobler picture of a wife is to be found than that of Andromache the wife of Hector. Hecuba, the aged wife of Priam, keeps the house in royal dignity, and is the friend and counsellor of her husband. Helen, when restored to Menelaus after her ten years' sojourn at Troy, resumes her place at the side of her husband without loss of credit or position. This honour paid to women does not however extend to those who were slaves either by birth or by the fortune of war. A king's daughter, like Cassandra or Andromache, becomes the property of her captor, and no consideration is paid to her or her children in regard of her former condition. Exceptions are found. Chryseis and Briseis are held in honour in the Grecian camp. Tecmessa, the παλλακή of Ajax, is raised above her servile estate by the favour of her master. But in most cases the chance of war seems to have effaced all claims based upon former prosperity. The woman whose husband has fallen whilst leading his countrymen to defend their city is beaten with spear-shafts and sent to herd with the slave women, to stand at the loom and bear the pitcher for a foreign mistress. Though monogamy was the universal custom in Homeric times, unwedded connexions with women were not considered disgraceful to either party. Odysseus is the accepted lover of Calypso and Circe, Peleus of Thetis: and Penelope has no reproaches to her husband for his unfaithfulness (cf. Eur. *Andr.* 213 sqq.). In Homeric Greece there is no instance of a royal harem such as that maintained by Priam in Troy.

657. Marriage was the rule for all, men as well as women. Parents could dispose of their children of either sex in marriage. A widow was expected to marry again if of marriageable age. We find no mention of divorce. Connexion by blood or by affinity was a bar to marriage: but marriage with a niece or an aunt, though rare, was lawful: Helen was successively married to two brothers (*Od.* iv. 276); and in regard to degrees of kin many distinctions were observed, connected with primitive marriage law. The wife came into her husband's hand by purchase. A sum of money or a present of other valuables, gold, silver, oxen, houses, slaves, etc., passed from the husband to the family of the bride. This payment was no doubt originally a compensation to the father for the loss of his daughter's services. The Greek term for it is ἔδνα, ἔεδνα. Sometimes the price was remitted by the father of the bride. Sometimes there was also a contribution from the family of the bride, to furnish her outfit and provide the marriage feast, e.g. Andro-

Marriage
in Homer.

mache and Penelope are ἄλοχοι πολυδωροὶ (*Il.* vi. 394, *Od.* xxiv. 294). It is easy to see how a gift on both sides to the married couple might supersede the ancient form of sale, and thus give rise to the custom of a dowry in the usual sense of property passing with the wife from her family.

658. It is of course possible that the picture drawn by Homer is coloured to please his audience, and that that given by Hesiod is truer. A wife is counted in the *Works and Days* (as in the Tenth Commandment) with a house and an ox :

Hesiod's
idea of woman.

οἶκον μὲν πρότιστα, γυναῖκά τε, βόων τ' ἀροτῆρα (405).

The two pictures are probably not far removed from each other in date. The discrepancy between them may be partly explained by the consideration that Hesiod describes the manners of the country folk as he knew them, Homer those of kings and warriors, heroes of romance like the paladins of mediaeval epic.

659. Professor Mahaffy adduces the *Danae* of Simonides as a picture of maternal love of a very high order, and mentions a love-story in an epigram by Stesichorus, in which a maiden dies for love, and certain fragments of Sappho, to show that love among the Greeks of this age could be not only pure but romantic. The instances of Sappho, Corinna, and Erinna, and what is known of their lives, point to a freer and more equal intercourse of women with men than we find existing at a later date : but the notices of women in the lyric poets are few, and are chiefly in praise of the conventional seclusion, 'home-keeping' habit, e.g. Theognis ἐχθαίρω δὲ γυναῖκα περιδρομον, Phocylides οἰκονόμος τ' ἀγαθὴ καὶ ἐπίσταται ἐργάζεσθαι. Equal and happy marriages must have existed in all states of society, and we do not need the authority of Greek poets to assure us that 'nothing is sweeter or better than when a wife loves her husband till old age, and the husband his wife, and there is no strife between them'; or on the other hand, that a man who married a rich woman might find himself the servant of her fortune. The development of civilization among the Ionian Greeks must have been affected by the neighbourhood of Oriental nations; and the idea of political life as connected with that of a πόλις tended to the comparative isolation of the mothers of citizens, since children born of slaves or concubines were not born citizens.

660. At Sparta, and generally among the Dorian nations, a greater freedom was enjoyed by women than among the Ionians.

Sparta. Young people of both sexes could meet each other without restraint. Girls were present at athletic contests in the stadium, to which matrons were not admitted. They wrestled, boxed and ran races, sometimes even with young men. The object of the law permitting this, according to Xenophon, was to provide, not slaves to sit at home and spin, but mothers of brave men. This freedom is said not to have had any bad moral results; the chastity of Spartan women was generally acknowledged. It should however be remarked that Aristotle (*Pol.* ii. 9)

speaks of the licence and parade of the Spartan women, produced by want of State-regulation, as having been a blot upon the institutions of the city from the first. They live (he says) in every kind of unrestrained luxury. Plato too (*Laws* 780, 781) uses similar language; and Euripides (*Androm.* 595 sqq.) says that no Spartan girl, even if she wished it, could ever be modest. Yet the idea that a noble progeny was the aim of marriage so far prevailed that in certain cases married persons exchanged partners, and some women had more than one husband and household. Only one instance of a similar licence to a man is recorded, that of King Anaximandridas. Marriage at Sparta followed the fiction of a violent seizure: and for some time the married couple met only in secret. The wife was not merely, as in Athens, a superior housekeeper. She was called *δέσποινα*, as in Homeric times, and the credit of her husband depended in part upon her conduct. Many instances are given of the devotion of Spartan women to their husbands. The wife and mother was expected to be not only a careful housewife, but a patriot, and to sympathise with all that made Sparta great. 'Return with your shield or upon it,' 'If your sword is too short, add a pace,' and many like sayings are characteristic of the Spartan women; and the mothers whose sons fell at Leuctra were thought more happy than those who received the survivors on their return. Daughters often shared equally with sons in the settlement of property by will, or even received a larger share. Dowries were also large. Hence it came that in the fourth century B.C. nearly half the land in Laconia was owned by women. Daughters were given in marriage at their father's will, as universally in ancient time; the king had the assignment of orphan heiresses to the kinsman who had the best claim. (For the special rules of marriage and inheritance at Gortyn see § 480.)

661. Generally speaking, in Greece marriage was a matter of convenience, and settled by the parents of the parties, care being taken to choose a wife of respectable origin, and in most cases of similar fortune. The wife was usually younger than the husband. Aristotle and Plato reckon the years from thirty to thirty-seven for the man, and sixteen to twenty for the woman, as the most suitable ages. The first step towards marriage was the solemn *ἐγγύσις* or betrothal by the *κύριος*, *i.e.* the father or other person standing *in loco parentis* to the woman. (*ἐγγυᾶν* is said of the parents, *ἐγγυᾶσθαι* of the husband.) In the terms of the *ἐγγύσις* was included the amount of the *προίξ* (money in settlement) and *φερνή* (personal ornaments and outfit). In all Greek cities it was easy for a man to divorce (*ἐκπέμπειν*, *ἀποπέμπειν*) his wife; and in the case of adultery he was bound by law to do so. No legal process was necessary beyond the presence of witnesses. The law only took cognisance of the wife's property, which, with the custody of herself, was vested in her nearest male relation or *κύριος*. Both at Athens and at Sparta a wife could lawfully leave (*ἀπολείπειν*) her husband, and take her property with her to her *κύριος*. Infidelity, or ill-usage, on the part of her husband, was a ground for the *ἀπόλειψις* of

Marriage
and divorce.

the wife. In leaving her husband, she had to make a written statement to the archon; whose general duty it was to protect the interests of married women, and who kept a register of divorces.

662. At Athens the wife's dowry—*i.e.* what she brought with her, whether outfit (*φερνή*) or property in settlement (*προίξ*)—did not, according to Greek ideas, become the husband's property. The husband had to give security (*ἀποτίμημα*) for it, usually in real property (*ἕγγειος οὐσία*). He had the administration and enjoyment of it during his married life, and if the wife predeceased him, till his death (if she left children) or remarriage; in either of these events it went to her children, or if she had none, reverted to her guardian (*κύριος*): and accordingly the husband could not alienate or mortgage it, and in certain cases might have to account for it. During widowhood, the dowry was administered by the widow, if she remained in her husband's family (*μενούσης ἐν τῷ οἴκῳ*); but her sons received their portion on attaining their majority, subject to a claim for alimony (*σίτος*); the daughters had no claim, if there was a son. If the widow married again, her property went from the estate of the first husband to that of the second. If her husband divorced her, her dowry reverted to her *κύριος*, or the husband paid interest on it at 18% and provided alimony in addition. In all matters respecting the property of married women, the intention of Greek law appears to be to preserve property in families as far as possible, and principally with a view to prevent the extinction of families, and so the disuse of family *sacra*. In the case of an heiress (*ἐπίκληρος*)—or rather where a woman represented property in default of male heirs, for the heir was her husband or son—her father or other *κύριος* might (1) bequeath his property to anyone he chose and his daughter with it, such person being bound to marry the heiress (if necessary divorcing his own wife) or to forego the inheritance: if he died intestate (2) her nearest relation could claim her: if the claim was disputed (*ἀμφισβητεῖν*), a trial (*ἐπιδικασία, διάδικασία*) was held by the archon, who adjudged (*ἐπιδικάζειν*) the *ἐπίκληρος*, according to the laws. If she was already married, she might have to leave her husband and marry the claimant; for in such a case the wishes of the persons concerned were not regarded in comparison with the legal disposition of the property. Women at Athens were subject to other disabilities besides those attaching to property. They could not (*e.g.*) give evidence (*μαρτυρεῖν*) in a court of law, though in certain cases they were capable of taking an oath upon a challenge (*πρόκλησις*); nor be parties to a contract.

663. When married, the wife was expected to live at home and give no trouble. She had to keep the house, to govern the large establishment of slaves, to have in her custody all the household stores and valuables, to set the women-slaves to their work, spinning, weaving, etc. But her principal duty was to breed citizens to keep up her husband's house; and to educate the boys till the time came for them to go to school, and the girls

Legal position of women at Athens.
(1) at home.

General position of women, especially at Athens,
(1) at home.

till they were married. The best woman, says Pericles, is she of whom her neighbours know least for good or evil report. The evidence of the Athenian orators and comedians points the same way. Her limit, says Menander, is the house door:

πέρας γὰρ αὐλίου θύρα
ἐλευθέρα γυναικὶ νερόμιστ' οἰκίας.

It is to be observed that few, if any, of the notable instances of female virtue are from Athens. Plutarch (*De mulierum virtutibus*) gives no Attic examples; nor does Athens furnish any names famous for genius or learning, such as Erinna and Corinna the Theban poetesses, Sappho of Lesbos, Damophila the Pamphylian and others of the Lesbian school, and Arete, the mother of Aristippus of Cyrene and herself a philosopher. Aspasia was from Miletus.

There are indeed noble types of womanhood depicted in the tragedians, Antigone, Iphigeneia, Electra, Alcestis, and Andromache, and in the *Oeconomicus* of Xenophon the wife of Ischomachus; and such pictures were no doubt drawn from Athenian experience. The influence of Euripides would be in the direction of emancipation. But the women of Greek tragedy receive the common inferiority of womankind as part of the law of life, to be accepted with the pains of child-bearing and the chances of war and slavery. Wives were present at their husbands' meals. The wife sat on a chair (*καθέδρα*), the husband reclined on a sofa (*κλίνη*). Of social intercourse between women and men not of their own family hardly a trace is to be found. Men, except the father of the house and a few near relatives, did not enter the *γυναικωνῖτις*: and it was not decorous for a woman to speak to any man in the street.

664. There were occasions on which women might appear out of doors without losing reputation, and married women had some duties and amusements outside the house. They took part in certain religious services and processions. They were admitted to the theatre when tragedies were performed; and in some parts of Greece they frequented the public baths. They sometimes went marketing, attended by a servant, and paid visits to each other at luncheon time (*ἄριστον*) and in the morning or afternoon. Unmarried women also took part in religious rites, such as the *ἀρρηφορία* and the Panathenaic procession. They were also admitted to *παννυχίδες*, a common occasion for lovers' meetings in the New Comedy (cf. Cic. *de Legg.* II. xiv.). Terence's *Andria* makes hero and heroine first meet at a funeral. It would be a mistake to suppose that women were discontented with this state of seclusion. To them, no doubt, as to the men, it appeared the only way of life which was consistent with modesty, and they had no wish for the freedom enjoyed by women whose reputation for *σωφροσύνη* stood lower: but Euripides (*Med.* 213—251 and elsewhere) has much to say of the hardships entailed upon women by their domestic imprisonment. The wives of poor men, as in the East, were

General
position of
women
(2) abroad.

unable to live in entire seclusion: and the conditions of country life lead everywhere to greater freedom. But it must be remembered that most of the hard work, in towns and country, was done by slaves, and that few citizens were so poor as not to possess slaves.

665. Where meeting with the other sex is forbidden, life must be dull; and besides the domestic work which must have occupied much of every day, the amusements of the *γυναικωνίτις* were chiefly conversation, telling stories, and games such as ball (*σφαῖρα*), swing (*αἰώρα*), dolls (*δαγύδες, κοραὶ*), knuckle-bones (*ἀστράγαλοι*), morra (*διὰ δακτύλων*), draughts (*πεττεῖα*), etc., and the care of pet animals (*θρέμματα*). In the well-known dialogue of the Syracusan women (*Theocr. Id. xv.*) it must be remembered that the women are Dorians, and that so much freedom would have seemed in bad taste at Athens.

666. Irregular unions with *ἑταῖραι* were common at all times, and were not looked upon as discreditable. Some of these women, as for example, *Lais*, *Phryne*, etc., the *ἑταῖραι μεγαλόμισθοι*, lived in great splendour by themselves or two or three together.

Others were maintained by their lovers: the largest class were slaves, who often practised the art of music (*αὐλητρίδες* and *κιθαρίστριαι*) and were hired to play and dance at wine-parties. These women were kept by their owners in separate lodgings, or private *πορνεία*. The lowest class of all (*πόρνοι*) were to be found in the public *πορνεία*. Another class, of whom *Aspasia* is the most famous instance, led irregular but not dissolute lives, and according to Greek ideas were almost without reproach. Such women were sometimes highly educated and held *salons* frequented by all the wits of the day. Married men as well as bachelors frequented the company of *ἑταῖραι*; and without much blame, provided that they did not neglect their wives, or outrage public decency. There can be no doubt that the institution of slavery, in Greece as elsewhere, degraded the relations of the sexes; and that as the condition of slaves was improved, some conscience of their claims as human beings came into existence, and had its influence on the habits of their masters. Concubines (*παλλακαὶ*) occupied a place between wives and *ἑταῖραι*. The relation was recognised by law and the children born, if the mother was a citizen (*ἀστίη*), were free (*ἐλεύθεροι*), but not legitimate (*γνήσιοι*), i.e. they were not members of the father's family and *φρατρία*. The father could, if he chose, legitimatise them (*ποιεῖσθαι*). *Παλλακαὶ* had no dowry (*προίξ*)—but in a case where the *κύριος* of a young woman gave her to a citizen *ἐπὶ παλλακίᾳ*, as happened in poorer families, some kind of settlement was made to protect her from being turned away without maintenance.

667. The late Mr E. F. M. Benecke in his interesting book on *Women in Greek Poetry* (Sonnenschein, 1896) gave reasons for believing that the position of women, considered from the point of view of sentiment, underwent a considerable change in the period covered by Greek literature. During the time of

Amusements
of women.

ἑταῖραι and
Παλλακαὶ.

Change of
sentiment
about women.

the earlier poetry, sentiment was chiefly reserved for *ἐραῖραι*, and was not of an elevated character. Love between a youth and a maiden was impossible when youths and maidens never met: and in fact sentiment played a larger part in the intercourse of young men with boys than in the relations of men and women. Marriage was a matter of convenience, not of affection; and the love of husband and wife was not assumed as part of the arrangement. At a later time, and partly in consequence of the conquest of Greece by the Macedonians, a people among whom something of the Homeric simplicity would seem to have survived, a higher tone may be observed. Women are not so often spoken of as 'a necessary evil,' nor marriage as a calamity. Romantic feeling between men and women is first observable in the writings of the Alexandrian School and in the later Comedy, in which a love-story of the modern kind is a common motive, and marriage is regarded as the natural end of a love-story, much as in the plays of Molière. This change must have come about by a corresponding change in social life, in the direction of greater freedom for women. The affection given to *ἐραῖραι* and slave-girls seems to have passed into a more romantic feeling, directed towards women of equal rank and that of the lover. 'Instead of the *ἐραῖρα*, the New Comedy introduces us to the *παρθένος*; instead of marriage being the stock subject of ridicule, it becomes the hero's ideal.' There is much refinement in the love-passages of Terence and even Plautus. Love is not only legalised, but becomes a part of virtue; and the excesses of young men are excused on the ground of youth, and not carried on into mature age.

Becker-Göll, *Charikles*; E. Guhl and W. Koner, *Das Leben der Griechen und Römer*; Smith's *Dictionary of Greek and Roman Antiquities*, Bibliography. s.v. *Matrimonium*, *Thesmophoria*, etc.; H. Blümner, *Privat-
altertümer*, being Vol. IV. of Hermann's *Lehrbuch der griechischen Antiquitäten*; Baumeister, *Denkmäler des klassischen Altertums* (list of articles on 'Leben und Sitten' on p. 2184); J. P. Mahaffy, *Social Life in Greece*. Cf. also G. Lowes Dickinson, *The Greek View of Life*.

¹ Benecke, p. 217.

VII. 6. DRESS.

668. OUR knowledge of prehistoric dress is mainly based on archaeological evidence derived from the excavations of Minoan Dress. Dr Schliemann and others on the mainland and from those of Sir Arthur Evans and others in Crete and the islands.



Fig. 140. 'Snake goddess' from Cnossus.

The essential feature of male and female dress throughout Minoan and Mycenaean civilization is the *loin-cloth*, a garment worn by people of the same race and of a still earlier age on the borders of the Neolithic period. The loin-cloth rolled round a girdle, with loose ends hanging in front, is sometimes triangular in shape, having the apex of the triangle drawn up between the thighs to form 'bathing-drawers,' and tucked into

the belt in front. A short kilt is sometimes arranged over it which, by degrees, develops into baggy breeches, not unlike the breeches worn by the Cretans now-a-days. The loin-cloth of the women undergoes transformation at an earlier stage than that of the men, who are found in Minoan art wearing the loin-cloth dress alongside of ladies attired in a later and more developed fashion. Yet the elaborate skirt of the ladies of the Middle and Late Minoan periods of Crete is but a fashionable

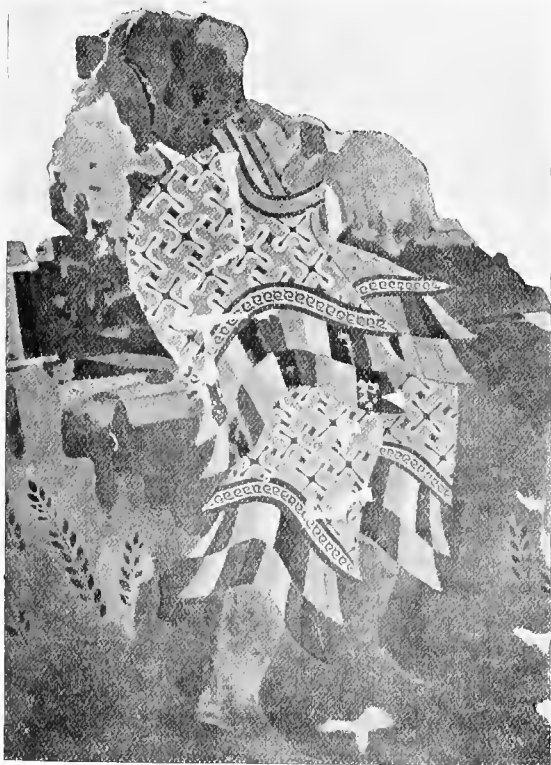


Fig. 141. Lady of the Palace of Hagia Triada.

development of the original loin-cloth. Men, in the 'Miniature Fresco,' Cnossus, wear, as part of their loin-cloth dress, an apron-like garment identical with the *polonaise* or short double apron of the 'snake goddess,' Cnossus (Fig. 140), while the women of the 'Bull-grappling Fresco,' Cnossus, wear a belted loin-cloth identical with that of the men both there and in the 'Miniature Fresco.' Seal-impressions, found at Zakro and Hagia Triada in Crete, show women wearing the belted *polonaise* by itself without skirt or

bodice. The dress of the 'snake goddess' (Fig. 140) is a reduplication and multiplication of the loin-cloth *polonaise*, retaining the primitive feature of an upward curve over the hips at each side. In the costume of the lady of the Palace of Hagia Triada (Fig. 141) it is uncertain whether we have a representation of a multiple petticoat or a series of divided skirts. To the loin-cloth skirt a 'peasant bodice' with sleeves to the elbow was, in time, added. Minoan art represents both sexes wearing a thick belt or girdle, tightly drawn to a narrow waist. Into this girdle men stick a dagger. The girdle of the women sometimes takes the form of a sash, rising to a large bow in the middle of the back (Fig. 142).

With the loin-cloth men wear high boots or buskins. They are quite naked above the waist while women retain a partial nakedness of the body, the bodice, when adopted, being open in front, exposing the breasts. In one instance a dancing girl from a wall-painting at Cnossus, seems to wear a



Fig. 142. Fresco painting of girl from Cnossus.

chemisette (Fig. 145). A high collar rising to the back of the neck adorns a female figure from Petsofa, Crete. Long robes are occasionally worn by men, in Minoan art, but they appear to be ceremonial in character. Skins of animals may have been the wear of very early times, but spinning whorls are found in the later Neolithic deposits of Crete and the forked distaff is recognised by Sir Arthur Evans among the pictographs of Cretan script. In Middle and Late Minoan times dress was of rich materials carefully cut and fitted. The men's loin-clothing (Fig. 143) and the dresses of women (Figs. 140, 141 and 145) are characterised by fine decoration in embroidery.

By the close of the Middle Minoan period the laced corsage is found and sleeves, puffed above the shoulders, appear. A fragment found at Petsofa shows a painted hand with a bracelet fastened by a button and

loop and this method of fastening may have been used in dress. The general effect is very modern, stylish rather than graceful. The colours depicted are vivid; red, blue, yellow, black, etc. are found. Evidence has been found at Leuke on the S.E. coast of Crete and on a site near Petsofa of the extraction of the colour of the 'murex' shell for dyeing purposes as early as 1600 B.C. Sir Arthur Evans thinks that yellow may have been obtained from the crocus-flower (*crocus sativus graecus*) depicted on early Cretan pictographs.



Fig. 143. Cupbearer from Cnossus.

The hair of Minoan man is long, sometimes coiled round the head but generally falling on the shoulders even with a helmet. He wears no beard. Women's hair is long and flowing. The snake-goddess (Fig. 140) wears a fringe. Fantastic knots and curls are worn on the head, above the brow, by both sexes. Hair-pins are constantly found, some from Mochlos, Crete, being of gold terminating in daisy-flowers. Men's heads are often bare. They sometimes wear conical caps with or without tassels while a head-dress of feathers occurs. Women wear high hats (Fig. 140) or a round 'plate-hat' pinched into shape here and there and trimmed with rosettes.

Jewellery of gold welded together takes the form of bracelets with a signet (Fig. 143), armlets, earrings, necklaces, chains, and seal rings either plated in gold over an engraved bronze core, or set with gems. Beads of steatite, amethyst, carnelian and rock-crystal have been found on Cretan sites. Cretan gold work is found on the mainland of Greece. The men on the gold cups from Vaphio are Cretans with small waists, thick girdles, loin-cloths and high boots. The lady on the gem, also from Vaphio (Fig. 144), wears the Minoan dress. The jewellery found at Mochlos, Crete, shows a close analogy to that of later date from Mycenae and is evidently its prototype. There is no essential distinction of race, as indicated by dress, in the civilization reflected by remains at Tiryns and Mycenae and that of Crete in Late Minoan times.



Fig. 144. Gem from Vaphio.

66g. The Homeric poems took their characteristic shape in the period of transition from the use of bronze to that of iron. The 'Age of Homer,' more recent than anything that can be called Minoan or Mycenaean, was an age when the great cities of which the poet sang were heaps of ruins and when men of a different race were dominant. In Homeric story the garments of a household are woven by the lady of the house and her maidens. Athena herself is pre-eminent in this art. The garments, each made as a thing separate and complete in itself, are a valuable possession and take a high place in the enumeration of the treasure of a house. The material of which they are composed would seem in many cases to be wool, sometimes linen.

The chief under-garment of men in Homer is the *χιτών*, apparently a sewn shirt-like garment not fastened by pins and probably made of linen as its glossiness is insisted upon. Under armour men probably wore a kind of jerkin of rough wool or leather to prevent abrasions of the skin. The outer garments of the men in Homeric times comprised wraps made of the skins of animals or of wool. These the *χλαῖνα*, *λώπη*, etc., were oblong pieces of stuff

Homeric
dress.

Dress of men
in Homer.

folded shawl-wise over the *χιτών*. They were early varieties of the *ιμάτιον* of historic times and were 'contrived a double debt to pay,' serving as bed-coverings as well as clothes. To this class belong the *σισύρα*, the *βαίτη* and others of the historic period.



Fig. 145. Wall-painting from Knossos.

The *χιτών*, both of wool and linen, seems to have been of two kinds. That worn by Menelaus appears to be short, but the Ionians are specially mentioned as *έλκεχίτωνες*. A girdle was worn with the short variety; the trailing kind seems to have been ungirdled, a custom preserved down to historic times for solemn occasions.

Ladies in Homer seem also to have confined themselves to two kinds of garments, one under, one upper. They wear as an under-garment the *πέπλος*, probably the equivalent of the 'Dorian' chiton of later Greece (Figs. 146, 150). As distinguished from the sewn chiton of the men it was a piece of stuff fastened with pins. It was probably left open at one side and without sleeves, as the white arms of the women are mentioned. It is evidently long; *έλκεσίπελος* is an epithet of the Trojan dame. The women's outer wrap was a veil-like

Dress of
women in
Homer.

piece of stuff, *κρήδεμνον, καλύπτρη*. This was no doubt an oblong piece of fine woollen or linen material thrown on and off at will.

670. In the dress of the Historic period in

Dress of his-
toric times.

Greece we find the *ἐνδύματα* and *ἐπιβλήματα* forming the chief

classes of garments, with the subdivisions of the Dorian and the Ionian modes. For literary evidence as to the dress of these times we must rely especially on the statements of Thucydides concerning the men's garments and of Herodotus concerning those of the women.

Thucydides notices (1) the oldest period

Thucydides
on the dress of
the men (i. 6).

when armour was universally worn—a fashion surviving in the historian's own day only in the

wilder parts of Greece; (2) the succeeding period when flowing robes of Oriental fashion were the mode, and (3) the 'present fashion' (*circa* 431 B.C.) of simple woollen garments of the Dorian kind. In the first period the armour may have been worn over a leather or woollen

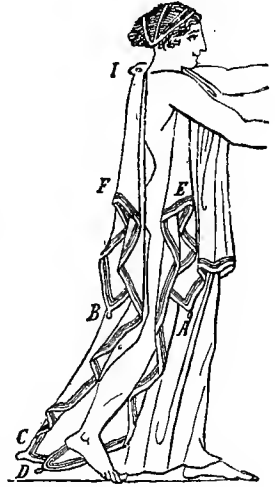


Fig. 146. Dorian chiton open at the side¹.



Fig. 147. Women wearing the Ionian chiton.

¹ Figs. 146, 148, 149, 150, 151, 152, 153 are reproduced from F. Studniczka, *Beiträge zur Geschichte der altgriechischen Tracht*, by permission of Carl Gerold's Sohn Verlag.

χιτών as we gather from Homer. The second period recalls the ἰάονες ἑλκεγίτωνες of Homer when long trailing robes of linen in the Ionian mode were worn. The third period witnessed the practical and useful revival of the short woollen χιτών—called 'Dorian,' which had been preserved from early times among such Dorian people as the Spartans, and was eagerly adopted throughout Greece in the burst of Hellenic patriotism and the reaction against things Oriental that set in with the victories over the Persians. But at the same time the long Ionian robes were not altogether discarded, but worn as a dress for religious and ceremonial occasions and by certain functionaries as flute-players, charioteers, etc.

Herodotus (v. 87) gives an account of the Athenian women changing their Dorian garments for the Ionian dress, a sewn garment requiring no pins.

When we come to the more valuable evidence of the monuments we may conclude that in historic times the earlier form of women's dress is generally of a sewn kind, while after the Persian wars (490—479 B.C.) the Dorian or pinned kind appears (Figs. 146, 148, 150, 151). In Athens, probably about the first half of the sixth century B.C. the Ionian kind came into vogue (Fig. 147, 153) and was worn contemporaneously with the Dorian till about the time of the Persian wars. Then, when anything savouring of Orientalism fell into disfavour, the Dorian fashion was more generally worn: although even then, the Ionian garment does not seem to have been absolutely discarded by women any more than by men.

671. It is now time to describe in detail, from the evidence of the monuments, the garments worn near or next the skin—the ἐνδύματα of historic times—the Dorian and the Ionian chiton both of men and women. As the difference between these garments for both sexes is but trifling they may well be considered together.

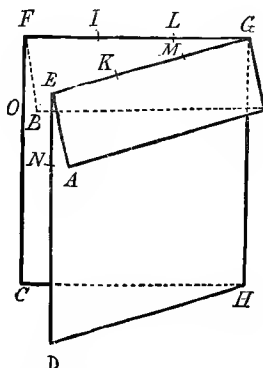


Fig. 148. Scheme of the open Dorian chiton.

G. A.

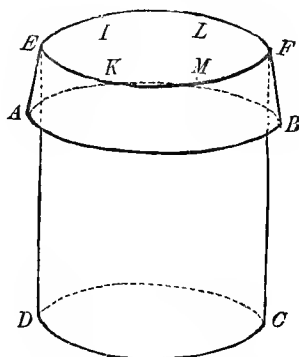


Fig. 149. Scheme of the closed Dorian chiton.

40

The 'Dorian' or woollen chiton of the women (corresponding in the main with the *πέπλος* of Homer) was composed of a large square piece of material *ABCD* (Fig. 148), which in the direction *AD* and *BC* was about a foot longer than the height of the wearer, and in the direction *BA*, *CD* as wide as the span from tip to tip of the hands with the arms stretched out to their greatest extent; e.g. for a woman of 5 ft 6 in. tall, the size would be about 6 ft. 6 in. \times 5 ft. 6 in. To form the chiton this piece is taken and the upper edge of it folded over (*ἀπόπτυγμα*, *διπλοῖς*, *διπλοῖδιον*) about the depth of the space from the neck to the waist *AE*, *BF*. Then the whole piece is doubled at *GH* and the lengths *FG*, *EG* are divided into three. It is generally assumed that these were three equal parts, but in practice, this leaves too much for the neck. The Greeks of a later period (200—168 B.C.) got over this defect by introducing 'gathers.' In the earlier period a pleated fold is introduced in the middle section *KM* and may have been secured by a pin. The points *I*, *L*, *K*, *M* being taken the garment is folded round the body, these points are made to correspond and are fastened together on the shoulders by pins. Thus one side of the garment, *GH*, is closed and the side *AED*, *BFC* is left open (Fig. 148). After putting on the chiton the wearer stands with extended arms and a girdle is passed round the waist from behind, the superfluous length being pulled up through the girdle and allowed to hang over it in a kind of bag (*κόλπος*). The open side was frequently closed by sewing or pins either partially at *DN*, *CO* (Fig. 148) or wholly (Figs. 150, 149). Sometimes the piece of *apoptygma* falling down the back was drawn over the head veil-wise.

Another way of dealing with the square of material is to omit the folding over of *AE*, *BF* and to take points parallel to *IL*, *KM* in the upper edge of the unfolded stuff, thus having no *apoptygma*, and then to draw the whole superfluous length through the girdle. Or the piece folded over at *AE*, *BF* may be so deep that no girdle is required, since there is no extra length left to be drawn through it. A third method, which goes by the

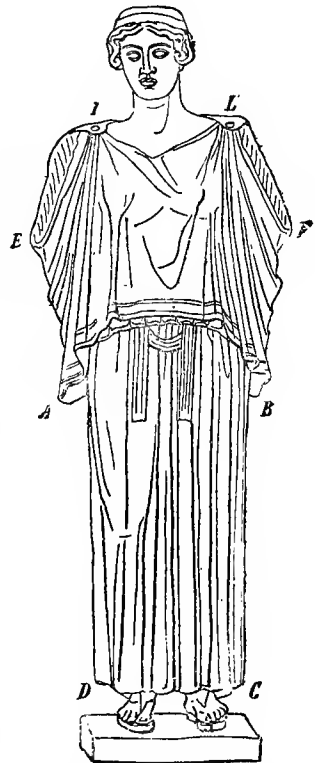


Fig. 150. Girl wearing the closed Dorian chiton.

name of the 'peplos of Athena' is given in Figs. 151, 152. In that case the girdle is put on outside a larger apoptygma than in Fig. 148, and no hanging κόλπος is drawn up. The 'Dorian' chiton was made of fine wool. The sleeve was formed, as desired, by placing buttons or pins at intervals from *IKLM* downwards to the elbow. Elaborate girdlings of extra cords crossed on the breast and attached to the waist girdle often appear in Art. It is not always easy to distinguish sharply on monuments between the closed Dorian chiton and the Ionian variety. A large class of examples seems to fall somewhere between the two. These may have been adapted for artistic purposes and not necessarily be an exact reproduction of the dress of daily life. The distinctive feature of the 'Dorian' chiton consists in the pins seen on the shoulders. From this feature it received the name *περονατρίς*.

The Dorian chiton for men was on the same lines as that for women, but not so wide and reaching only to the knee or calf. It had no *διπλοῦς*. The part below the girdle was sewn together, the upper part was connected on the shoulders by fibulae or buttons. Slaves and workmen only fastened it on one shoulder, *ἑξωμῖς, ἑτερομάσχαλος χιτῶν*. The original pin used for the fastening of garments among primitive peoples was made from the

Dorian chiton
of the men.



Fig. 151. From the Varvakeion statuette.

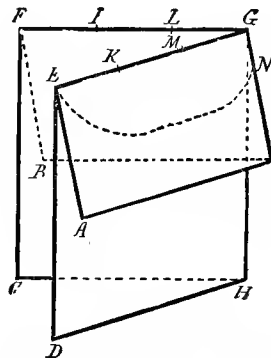


Fig. 152. Scheme of the peplos of Athena.

small bone of an animal's leg, hence its name '*περόνη*' or '*fibula*.' This was next introduced in metal, mounted with a bronze head and decorated with balls of bronze. The point may have been bent back to prevent it

from slipping out, and from this bending back the developed form of 'fibula,' of which the modern 'safety-pin' is the lineal descendant, may come.

672. The Ionian chiton was entirely without pins, being a sewn garment very like a sleeved night-gown made of linen (Fig. 153).

The Ionian
chiton.

The piece of material required is about a foot less in height than for the 'Dorian' chiton. It may consist of two

pieces, one for the front and another for the back, or of one piece double the size of these and folded. The sewing to close the seams follows the

dotted lines (Fig. 153). The distance from *A*

to *B* being half the full span of the wearer, a long hanging sleeve is obtained (Fig. 147).

The girdling is on the same principle as for the 'Dorian' chiton, the superfluous length

forming a kolpos. This garment was the same

both for men and women. The long chiton

remained as the dress of men of middle life

and was also used by younger men on solemn

or religious occasions. The material of the

'Ionian' chiton is a finely crinkled kind of

linen, elastic in nature, similar to a stuff still

to be found among the home productions of

modern Greece. It is finished with a selvage,

not a hem, and from its elasticity would close round the neck of the

wearer, after his head had been inserted, as in the case of our modern

jerseys. The chiton, in its varieties, is sometimes cut short so as only to

reach the knee for women when active exercise is desired. Iris, Artemis

and the Amazons are so attired in Art. In Sparta, from their twelfth year

men wore, winter and summer, as an only dress the 'τρίβων,' i.e. the

small oblong coarse mantle of the Doric tribes. This was also worn in

Athens as a special dress for active military service. But it was considered

boorish for fashionable persons to wear it. The women of Sparta seem to

have gone abroad in a short chiton only.

The ζώνη is an important feature of the women's dress in Homer. In

The girdle. Art the height at which the girdle is set is a fair guide to the

date of the monuments. In archaic Art it is placed at the

line of the waist. About 450 B.C. it goes slightly below this, as in the

dress of the maidens of the Parthenon frieze. By degrees it is placed

higher till, as time goes on, it reaches the arm-pits. Ladies inclined to

stoutness restrained the exuberance of their figures by a broad band

(στροφίον) worn under the chiton.

673. The class of ἐπιβλήματα for men and women in historic Greece

comprises all outer garments of the shawl or wrap class. The

chief of these was the ἱμάτιον, worn both by men and women.

In shape it is a large square or oblong, varying in size

according to taste and weather. Women often drew it over

the head as a covering, and in deep grief muffled the face

Outer garments of both men and women in historic times.

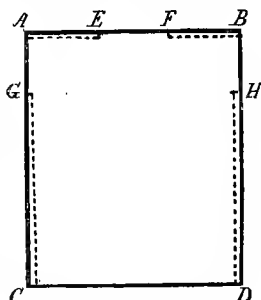


Fig. 153. Scheme of the Ionian chiton.

with it. The general rule for its arrangement in classical times for both men and women seems to have been as follows:—One corner of the piece



Fig. 154. Sophocles in the Lateran, Rome.

of stuff is folded or gathered up and grasped by the hand, pulled over the left shoulder from the back, tucked in securely and held firmly between the body and the left upper arm pressing against the ribs. Then with the right

hand the mantle is pulled out across the wearer's back by its right-hand top corner, opposite the corner already secured, till the lower edge of the garment hangs about half-way across the calf of the leg. Then the wrap is brought round over the right side of the body, ἐπιδέξια ἀναβάλλεσθαι ἐλευθέρως, when two ways of disposing of the right-hand corner are possible, viz.:—(1) If the right hand and arm are wanted to be free, the mantle is brought under the right shoulder, drawn across the chest and the end thrown over the left shoulder. (2) In the way considered more suitable for honourable citizens, the mantle is brought over the right arm and shoulder (the arm being bent at the elbow), so that only the right hand appears in a sling-like fold in the front, and then the end is thrown over the left shoulder (Fig. 154). Weights of lead or clay were affixed to the corners of garments to keep them in position. The correct adjustment of the ἱμάτιον was considered an index to a man's character. Judged from the monuments, women often drew the outer folds of the himation over the head as a hood or veil and passed the garment over instead of under the right shoulder. When worn by ladies the ἱμάτιον often bears the name ἀμπεχόνη or φᾶρος.

A narrow, doubled ἱμάτιον, put on cloak-wise from the back, appears on archaic vase-paintings. The χλαμύς, a wrap for men in active work, originated in Thessaly as a rider's cloak worn over armour. From the fifth century it was universal in Greece as the dress of young men serving in the cavalry or for active daily life. It was a short, light, oblong mantle, the corners square or rounded, fastened with a clasp in front or on the shoulder. Women wore a pretty variety of the χλαμύς, the δίπλαξ, a square of stuff doubled and clasped cloak-wise.

674. Children seem as a rule to have worn miniature editions of the dress of their elders. Girls wear the 'Dorian' or 'Ionian' χιτών, while boys wear the short χιτών only or are muffled closely in large ἱμάτια. Frequently in Art boys are depicted without any clothes at all. Infants were closely swaddled, Italian fashion, and wore conical caps.

Dress of children.

Dress of foreigners.

In Greek Art foreigners are generally represented as wearing ἀναξυρίδες and long sleeves. These long sleeves to the wrist are also, in the case of women, the mark of the slave.

675. The men's garments appear to have been made both of wool and linen—the former for the generally worn Dorian, the latter for the less used Ionian style. For all their clothes women seem to wear thinner and lighter materials than men whether in wool or linen. The muslins of Amorgos are mentioned in Attic comedy and the garments of Cos were specially delicate and transparent. These were probably not worn by dignified matrons except in the strict seclusion of their homes. In early art and up to the time of the Persian wars a soft crinkled crape-like material, presumably of linen, with a selvage edge, is used for women's garments. After the time of Pheidias this

Materials.

disappears and a plain surfaced stuff finished with a hem takes its place. Besides wool and cotton, *βύσσοσ*, an expensive material, woven doubtless as in modern Taranto from the silky thread of the Pinna shell, was used for veils and the like. Silk was spun and woven at Cos but was extremely dear in Alexandrian times and may have been imported. Garments depicted on Greek vases are often elaborately fringed and embroidered. The *χιτών* and *ιμάτιον* of the men seem to have been white or neutral in tint as a rule. Workmen and field-labourers wore brown. The women's clothes were much more gay in tone, Colours of materials. white, saffron, red, blue and green are found in Greek Art, often with check patterns and devices of animals, birds and stars introduced.

676. The hair of the men in Homeric times is long. Thucydides mentions the long hair of the Athenians, with the ornament in the form of the *πέττιξ*. He may allude to a fibula or clasp of Hair. that form, or may mean that the heavy braid of hair hanging down the back was bound round and round with gold till it resembled the ringed body of the tettix (tree cricket). The long hair of athletes in Greek art is so bound, or plaited in one or two long tails and wound round the head. From the time of the Persian wars the more convenient custom of short hair prevailed in Greece for men. The younger gods at this time appear in art without beards. A boy on reaching manhood generally dedicated his long locks of hair in the temple of a river-god. In early times full beards were worn. The Macedonian victors introduced the fashion of shaving, but the short beard is often found in Athenian art of Macedonian times. The beard was proverbially, also, the mark of the philosopher. Foreigners generally wear both a beard and a moustache in Greek art. The hair of the women was dressed in many elaborate styles, waved, plaited and crimped. Young girls wore theirs loose and flowing. Hair-pins of gold and other materials are found in women's graves. As a woman's head-dress, the 'Greek fillet' wound several times round the head is proverbial. The *στεφάνη* or circlet of metal, the *σφειδόνη* (or sling), the *ἄμπυξ*, a circlet used to keep the hair-net secure, and the *σάκκος* or bag-net were all adjuncts of hair-dressing that may be studied on the coins of Syracuse.

677. When walking about the city near home no hats or caps seem to have been worn by either sex, indeed in the case of the women their elaborately-dressed hair would have suffered from any Coverings of the head. weight greater than a light veil or the corner of the *ιμάτιον* drawn over the head. On journeys women sometimes, as appears from the statuettes found at Tanagra, wore a coquettish variety of the men's *πέτασος*, i.e. the flat felt hat with flaps at the back and front and over the ears. This hat, with the *χλαμύς* or cloak, was the usual attire of young men in Greece for hunting or travelling. Artisans or fisher folk wore the *πίλος*, a conical cap of felt or leather. Charon, Hephaestus and Odysseus wear it in Art. Umbrellas are found in Greek Art, but do not seem, so far as

can be judged, to have been used as a protection against rain. They are often carried by an attendant.

678. In their houses the Greeks seem to have gone barefoot, especially in summer. Out of doors they wore the *σανδάλιον* or *ἐπόδημα*, a simple sole tied on by thongs of leather passing between the toes. For hard country walking and for hunting the sole was set round with leather somewhat in modern fashion; interlaced thongs arising from this 'upper' were bound round the leg as high as the calf. These were the *ἐνδρομίδες*. The *κόθορνος* was also a high boot reaching to the middle of the leg with very thick soles. As worn by tragic actors, its heels served to add height to the figure. The *ἐμβάς* was a kind of felt shoe worn by the poorer classes and by such rough country-folk as the Boeotians. On entering a house it was customary for everyone to uncover the feet. Shoes were left at the door when paying calls, as nowadays in the East. Women seem to have adopted the *περσικαί* or slippers of the East, according to Aristophanes.

679. From what has been said it will be inferred that, judged by modern standards, Greek dress of the classical period was of a very scanty sort, consisting as it did of squares of material draped about the body. Garments so adjusted can only have remained in position in repose, and must have been very troublesome in active life. But quiet dignity was a sign of high breeding among the Greeks. If the climate of Greece was in ancient times at all what it is to-day there must have been many stormy days when additional wraps would be necessary and no doubt were worn. Philosophers and persons affecting an extreme simplicity of dress and manners usually wore a himation only without any other garment summer or winter. Male slaves and persons doing hard manual work wore the short woollen chiton alone. Anyone wearing the *χιτών* alone was reckoned as being *γυμνός*, the term not necessarily implying absolute nudity but meaning simply 'lightly clothed.' Women indoors seem to have been content with the *χιτών* only, throwing on the *ἱμάτιον* when out of doors. As to the generally scanty clothing we can only assume that exposure of the body in the case of men was not considered in the same light as by us, and remember that the climate was a southern one and that the women lived almost entirely separate from the men and did not share in their pursuits.

F. Studniczka, *Beiträge zur Geschichte der altgriechischen Tracht*, Vienna, 1886; J. Boehlav, *Quaestiones de Re Vestiararia Graecorum*, Weimar, 1884; W. Müller, *Quaestiones Vestiariae*, Göttingen, 1890; J. C. B. Mohr, *Lehrbuch der griech. Privatalterthümer*, Freiburg, 1882; Friederich, *Die Tracht bei Homer*, Erlangen, 1856; Maria Millington Evans, *Chapters on Greek Dress*, Macmillan, 1893; *Jahrbuch des Kaiserlich Deutschen Archäologischen Instituts*, Band XI. 1896, p. 19, article by A. Kalkmann; *Annual of the British School at Athens*, espec. Vols. IX., XII.; *Journal of the Hellenic Society*; *Monumenti Antichi, Lincei*, Rome, Vol. XII. ff.; *Publications of the American School of Classical Studies* and of the *American Archaeological Society*; Boyd Hawes, *Gournia*; R. B. Seager, *Explorations in the Island of Mochlos*; E. B. Abrahams, *Greek Dress*, London, 1908; R. Burrows, *Discoveries in Crete*, 2nd edit. London, 1908; F. H. Marshall, *Catalogue of Jewellery*, Gold Room, Brit. Mus., London, 1911; Articles on 'Crete,' 'Aegean Civilization,' etc. in *Encyclopaedia Britannica*, 1911.

VII. 7. DAILY LIFE, ITS SURROUNDINGS, EMPLOYMENTS AND AMUSEMENTS.

A. TOWN LIFE.

680. WE cannot draw any rigid line between town and country life in Greece in early times. There, as elsewhere, those employed in tilling the fields lived together in villages for the sake of greater security, and went out to their work, often a considerable distance away. It will, however, be more convenient to treat the employments and amusements of the town apart from those of the country, as well as to describe separately the conditions and surroundings of the two. A Greek town was as a rule placed in a position which was a compromise between various conflicting advantages. In the first place it must be near some fertile plain, which could supply the food of the community; then it must be, if possible, within reach of the sea, which was from the earliest times the chief medium of communication and commerce; at the same time it must be secure from attack, whether by land or sea. Hence we find it is usually clustered round some isolated rocky hill, which served as the dwelling-place of the king in early times, and was extensive enough to shelter his subjects, and often their flocks and herds as well, in times of danger. It is usually at such a distance from the sea that it could not be surprised by a sudden raid of enemies or pirates. Such an arrangement necessitated a harbour town, usually some three or four miles distant; as in the case of Athens, Megara, Corinth, Argos, and other cities. The practice of surrounding the lower town as well as the citadel with a wall was almost universal in later times, and is probably to be associated with the growing importance of the people. In many cases the citadel ceased to be regarded as a fortress, and became the centre of public worship, containing the most sacred shrines and the most valuable dedications; this was especially the case with the Acropolis at Athens. At the same time the city was in some cases, at Athens and Megara for example, connected with the harbour town by long walls, and thus made practically unassailable by land so long as it kept control of the sea.

General aspect and arrangement of a Greek town.

681. As the palace had been the centre of life for the subjects and vassals of a king, so the agora became in later times the centre of life for the citizens. The influence of this change upon the position of temples and other religious buildings is mentioned above (§ 417). In most old towns the agora was in some convenient and accessible spot in the midst of the city; it was usually of irregular shape,

The agora.

being at first without any definite boundaries, and becoming gradually shut in by the porticoes, law-courts, and other public buildings that grew up around it. In the case of towns which were deliberately planned out, we find a square or oblong agora, surrounded by regular porticoes; such was known as the Ionic agora, and was prevalent in the rich Ionic cities of Asia Minor; but this form was unusual on the mainland of Greece, except in the case of towns, like Megalopolis, which were founded at a late date. The agora was originally the place of public meeting for the citizens, as well as the market-place; it was filled with temporary stalls and booths for traders, which could be cleared away on emergency. Parts of it were assigned to different trades, and called after the goods sold there; and a large town, such as Athens, had smaller special markets besides the chief one. In addition to the agora or agorae, the temene or precincts of temples would be the chief open spaces in a town; these were rigorously protected from encroachment either by walls or by boundary stones.

682. Apart from such open spaces the houses were closely crowded together and the streets were narrow. One recently excavated at Athens, which was certainly an important thoroughfare, and possibly the main road from the agora to the Acropolis, is only about 15 feet wide. Hence the streets of an ancient town must have had a very mean appearance, especially as the private houses usually showed blank walls on the outside; of course a street that ran beside sacred precincts or public buildings was more imposing, especially if it were bordered by dedications, as was the Street of the Tripods at Athens. The temple with its adjacent temenos, and also the normal private house are described elsewhere (§§ 417, 710); but it must be remembered that a great part of the dense population of ancient cities cannot have commanded the space necessary for such arrangements. In early times the possession of a hearth and home of his own was probably a necessary qualification of a citizen; but house property, not for occupation but for investment, is a regular institution in classical times; such property was often in the form of *συνοικίαι*, or common dwelling-places for the poor; such a *συνοικία* was under the charge of a man called the *ναύκληρος*, who looked after the tenants, collected their rent, and acted as steward to the owner. Those who had no civic rights could not acquire landed property, and so were obliged to hire the houses or rooms in which they lived; and probably the poorer citizens, who had mortgaged or lost their property, were often reduced to the same manner of living.

683. Town life was mostly divided between political duties, society, and recreation—except of course in the case of those engaged in commerce, and artisans and others who were classed together by the Greeks as *βάνανσοι*. The day was divided into three portions in early times; cf. *Il.* XXI. 111 *ἔσσεται ἢ ἡὺς ἢ δειλῆ ἢ*

Town life.
Divisions of
the day.

μέσον ἡμαρ. The later division implies that the frequenting of the agora (πλήθουσα ἀγορά), whether for business or conversation, was the most important condition of daily life. If there was a political assembly, or if a man was serving on a jury, or if there was a great religious festival, everything else had to give way to the event of the day; but on ordinary occasions the course of an Athenian citizen's life seems to have been much as follows. He rose about dawn, or earlier, if necessary, and washed either with the help of a slave, who poured water from a jug over a basin, or at one of the public fountains in the streets. He also took his ἀκράτισμα (§ 692). Then he took exercise, at home or in the gymnasia, or paid calls, until it was time for him to go to the agora. This early part of the day was commonly referred to as πρῶτ. Then came the time known as πλήθουσα ἀγορά, which lasted till about noon. This, as the name implies, was the time when the market was frequented, when business was done, and when news was discussed or conversation on more serious subjects was carried on. In bad weather people would congregate in the porticoes that surrounded the agora, and even in the shops; in winter, those were most popular which required a fire, such as smithies or the furnaces of baths. Boys and young men, who as a rule avoided the agora itself, were also in the habit of loitering about the shops. At mid-day (μεσημβρία) the agora became deserted (ἀγορᾶς διάλυσις); it was usual to take a meal of some sort, though this was not of a formal character, nor was it necessary to go home for it. Probably many people contented themselves with buying some of the food usually hawked about the agora, and ate it on the spot, or in a convenient shop. The practice of a siesta at mid-day, now so universal during hot weather in Southern Europe, appears to have been regarded with as much disfavour in Athens of the fifth and fourth centuries as by Hesiod; it was about mid-day probably that places of resort such as the barbers' shops (κουρεῖα) were most frequented, and also the λέσχαι, which corresponded in some ways to a modern café, in others to a club; while the early afternoon was spent in the gymnasia or the baths. So the time was passed until the approach of sunset brought the hour of the evening meal (δείπνον), which was more of a formal and social function, and was usually taken either at home or at the house of a friend. In most cases this meal was probably a moderate one, and the habit of early rising seems to imply an habitually early bed-time. But on special occasions, a banquet might be followed by a drinking-bout (συμπόσιον), and by entertainments or conversation that lasted far into the night, or even, as the famous Symposium of Plato, till the next morning. It was probably an unusual thing to pursue any serious employment after the evening meal; but a few studious and literary people worked late at night, and such a practice was probably necessary to those whose whole day was taken up with political and social duties. Technically speaking, the day ran from sunset to sunset. The night had divisions as well as the day; for military and naval

Divisions of
the night.

purposes it was divided into watches; generally it was considered as consisting of three portions; cf. *Il.* x. 253

παρώχηκεν δὲ πλέων νύξ
τῶν δύο μοιράων, τριτάτη δ' ἔτι μοῖρα λέλειπται.

These parts were called ἔσπερος or περιὶ λύχων ἀφάς, μέσαι νύκτες, and ὄρθρος. The divisions were not of course accurate either in the case of the night or of the day; time was reckoned by sundials or by the length of the shadow thrown by a vertical staff, and later by a water-clock. The twelve divisions of the day were known to Herodotus as a Babylonian invention; but they were not in practical use, nor was the word ὥρα applied to them until Roman times.

B. COUNTRY LIFE—AGRICULTURE, ETC.

684. The circumstances of country life in Greece were to a great degree dependent upon social and political conditions. We have already noticed how closely town and country life were connected in early times; the constant risk of invasion, when all the inhabitants had to take refuge within the walls of the towns, and the great number of independent cities, each with its little area of cultivated ground around it, tended to perpetuate these primitive conditions. A concentration (συννοικισμὸς) such as that of Attica, attributed to Theseus, would of course tend to cut off a class residing in the city from the country people, and factions like those of the coast, the mountain and the plain seem to indicate local sympathies; but they were over-ridden by Cleisthenes' redistribution of the demes; every citizen, whether of a town or country deme, had equal political rights, and came to Athens to exercise them; and the policy of Pericles, by which the whole country was left deserted to the invading enemy, and all the population concentrated behind the walls of Athens and the Peiraeus would not have been possible if a country life was recognised as a distinct profession. In his famous speech Pericles refers to country houses as an ἐγκαλλώπισμα πλούτου, which the owners must be ready to give up. Some men, indeed, like Xenophon when he settled at Scillus, lived altogether the life of a country gentleman; but such exclusion from political life was exceptional, and was regarded as reprehensible. Even Xenophon's Ischomachus was often to be met in Athens. Country houses probably did not differ essentially from town houses, except that they were less cramped for space, and included store-rooms and farm offices. Farms were mainly worked by slave labour, the stewardess (ταμία), who had charge of the household goods, being an important functionary both in Homeric and in historical times; a foreman (ἐπίτροπος) also was necessary to supervise work in the master's absence. It was possible, by closing a door, to separate the apartments of the male and the female slaves; but it does not follow that there were two separate courts; sometimes the women's quarters were in a kind of tower that could be closed (*Dem. in Euerg.* 53).

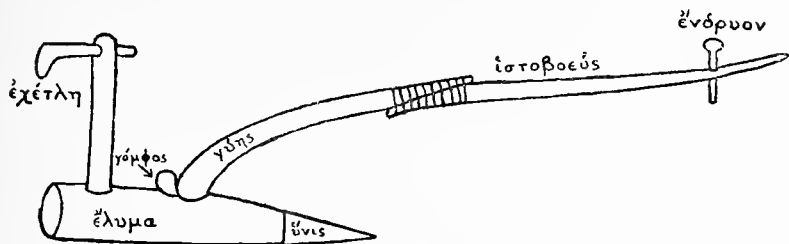


Fig. 155. Hesiod's plough—*Works and Days*, 427—436.



Fig. 156. Ploughing; from a vase by Nicosthenes.

685. The chief agricultural products of Greece were, as they are now, corn and wine and oil. The plough was generally used for Agriculture. breaking up the ground. Hesiod's description of a plough (Fig. 155) (*ἄροτρον*) would probably apply to historical times, and all its parts can easily be recognised on vase paintings (Fig. 156). It might be either *πηκτόν*, pieced together, or *αὐτογύες*, a natural trunk of a tree with a branch growing out of it that would serve for the lower part of the pole. In either case it would have a plough-tail added by which it could be guided. Oxen were generally used for draught; the system by which they were fastened to the yoke, and the yoke fixed by thongs (*μέσαβον*) and a ring (*κρίκος*) to a peg (*ἔνδρον*) inserted in the end of the pole was the same as in a waggon or chariot. Hesiod also gives instructions for making a waggon (*ἄμαξα*, Att. *ἄμαξα*). The usual digging instrument was the mattock.

Of the cereals, barley (*κρίθος*) and wheat (*σίτος*) are most commonly mentioned. Harvest time in Greece is from April to May in the plains, and about a month later in the mountainous regions. Corn was cut with the sickle (*δρέπανον*), and then bound into sheaves. Threshing was usually done by means of cattle treading out the corn, and winnowing followed, with the help of a shovel (*πτύον*) on a breezy day. Another winnowing instrument was the fan or basket (*λίκνον*).

686. Vines in Greece are now almost exclusively dwarf plants, requiring no supports, except when they are grown for shade on pergolas. Vines, olives, fruit. This was probably the case in ancient times also; for there is usually no indication of trellises and other supports on vase-paintings, where vine branches frequently appear. The Italian custom of training vines on trees was not usual in Greece. The vintage comes in September, about the beginning of the month in the plains, towards the end of it in the hills. The grapes were picked in baskets, and trodden in wine presses (*ληνός*), of which some ancient specimens still survive. They consist of a cemented floor, surrounded by low walls, and sloping towards one side, where there is an outlet leading into a sunk vessel. The wine was then stored in jars (*πίθοι*) to ferment. (For the use and preservation of wine see § 691.) Olives were gathered in late autumn. They were first crushed (*θλάω*) beneath a heavy stone wheel which worked in a circular trough, and then they were put in baskets, and squeezed (*ἐκπιέζω*) beneath a long wooden lever, or sometimes, in later times, a screw press. Remains of these have been found in Asia Minor and Cyprus. Many kinds of fruit were grown, the commonest being figs, apples, and pomegranates.

687. Fruit trees imply the existence of orchards, and vegetable gardens must also have existed both for private use and for the Gardens. supply of the market, though doubtless the ancient Greeks, like their modern successors, depended to a great extent upon the wild herbs that grow freely on the hills, and that are eaten both cooked and raw. The demand for flowers, especially for making wreaths, must also

have necessitated extensive flower-gardens. The distinction between gardens for the production of what was required for the house or the market and pleasure-gardens probably did not exist in early times; the earliest pleasure-gardens seem to have been laid out about temples and springs; they were often sacred to Aphrodite, as the *κηποι* at Athens. It was not until the Hellenistic age that the custom began of laying out gardens in towns around houses; this practice was attributed to the influence of Epicurus. But the variety and artificiality ascribed to the *ars topiaria* of the Romans was only gradually developed, partly, perhaps, under oriental influence.

688. Cattle, sheep, goats and pigs were all kept for food, and sheep and goats for milk also. Cheese was commonly made, but not butter. Pasturage such as we are used to hardly exists in Greece, and the duty of the shepherd is to lead his flocks over the mountains, to crop what herbage can be found. Poultry and eggs also formed a staple article of food, and must have been supplied by farms. The chief amusement of country life was hunting, in which dogs were so essential as to give the sport its name (*κνηγετεῖν*). Hares were coursed on foot with dogs, and driven into nets, and the same process was used for small deer. Boars were also hunted on foot with a spear. Birds, especially the smaller kind, were usually snared with nets. The bow was of course generally used for shooting game of all sorts; the *λαγωβόλον* or throwing stick was also used as a missile.

Pasturage
and hunting.

C. FOOD AND DRINK, MEALS, COOKING, AND ENTERTAINMENTS.

689. It appears at first sight that the Greeks of Homeric times were much more used to meat diet than their successors. At the feasts of the heroes whole sheep, pigs, and oxen are cut up and devoured; and the custom is shared by the common people also, *e.g.* by Eumaeus in the *Odyssey*, though it would appear not only extravagant but coarse and brutal to a later Greek. Fish is caught and eaten in the time of Homer, but only by those who can get nothing better; a reduction to a fish diet is regarded as a painful strait, in great contrast to the ideas of later times. Bread is eaten with the meat, and barley meal is sprinkled over it before cooking; but we do not hear much of vegetables—except onions, which are eaten with wine. Meat, however, seems to be the main article of food. In later Greece, on the other hand, farinaceous food, in some form or other, is always regarded as the essential thing, and what is taken with it, whether meat, fish, cheese or other vegetables, is called *ᾄψον*; in fact the history of this word, which originally meant boiled meat, but was later specially applied

Food in
Homer;
abundance of
meat.

Later cus-
tom; farina-
ceous diet and
ᾄψον.

to fish, and even to a flavouring like salt, is an indication of the change of custom.

690. Attica did not grow enough grain for its own consumption, and consequently the command of the Hellespont was essential to Athens, in order to secure the supply from the regions round the Black Sea. The meal used was mostly of wheat and barley; the former was, of course, the usual material for making bread (*ἄπρος*); the latter was often made into a kind of porridge. The bread also was either made with yeast or without; in the latter case it was probably made in thin cakes; but the more elaborate process was usual in refined society. Broth made of various kinds of beans and pulse was also much eaten. Such vegetable food, together with cheese (cheese made from ewes' or goats' milk), dried fish (*τάριχος*) such as was imported at Athens in large quantities, fresh fish (from the small fish called *ἀφύνη* to the tunny (*θύννος*)), oysters and other shell-fish, olives, and other vegetables, figs and honey, probably formed the usual diet not only of the poorer classes, but also of well-to-do people. Meat

Meat from sacrifices.

was only eaten on the occasion of a sacrifice, in fact, the Greeks had no other word for an animal killed for food than *ἱερεῖον*, a victim for sacrifice. But the frequent religious

festivals gave an opportunity to all classes to enjoy this luxury; and nothing prevented a rich man from offering sacrifices as often as he pleased, and feasting himself and his friends; while the parts of a victim which were the perquisite of the priest must usually have been sold by him to less wealthy customers. Game was also eaten by those who could obtain

Game, fish, etc.

it, whether by hunting themselves or by purchasing it; but this also was probably a luxury for special occasions rather than an article of daily food. The thrush and the hare—

the latter still extraordinarily good in Greece—were the favourite dishes. Sausages made of blood and tripe were, as we know from Aristophanes, hawked about in the market, and so were commonly eaten by the poorer classes. Among the luxuries specially affected by richer people, beside game, lambs, and kids, were superior kinds of fish, for example eels from Lake Copais. Fish, indeed, was the luxury most affected by gourmets.

691. The Greeks usually regarded milk as the most primitive drink, but

Drinks, milk, etc.

did not make any extensive use of it; the milk used for cheese or other purposes was, as it is still in Greece, that of sheep or goats, that of cows being regarded as unwholesome. Butter

was practically unknown, except for medicinal purposes, olive oil being universally used for cooking. To drink milk neat (*ἄκρητον*) is described in Homer as intemperate. The usual drink of all classes was wine, which

Wine.

was, then as now, made in almost all parts of Greece, though some places naturally had a higher reputation than others.

The greatest quantity of wine was exported from the islands of Rhodes, Thasos, Samos, Lesbos, Cos and Chios. After the store-vats (*πίθοι*) were opened, at the festival of the *πιθουργία* in early spring, it was trans-

ported, sometimes in skins (*ἀσκός*), sometimes in amphorae (*ἀμφορεύς*), of which the stamped handles, as well as the plaster stopping, served as the brand of the wine, and attested its origin and year of vintage. Age was of course a recommendation to wine; but it does not appear that the Greeks kept their wine so long as was usual among the Romans and is the custom among ourselves. Theocritus speaks of a wine four years old as if it were exceptional (VII. 147, XIV. 16); and it is quite possible that old wine (*παλαιός οἶνος*) may have often meant, in ancient, as in modern Greece, no more than two or three years old; in fact, anything but last year's vintage. Great care was taken in the preparation of wine for the table. It was always mixed with water immediately before serving; the most usual proportion appears to have been two of wine to three of water; but it varied very much according to the character of the wine and the taste of the drinkers; it was often cooled with snow in hot weather. Sometimes wine was boiled, which was supposed to make it less intoxicating; sometimes it was made into a sort of 'cup' by the addition of myrrh and other spices. The colours and characters of the various Greek wines seem to have been about the same as at the present day; they may be classified according to colour as black or red (*μέλας, ἐρυθρός*), white (*λευκός*) and yellow (*κιρρός*), or according to taste as dry, harsh, light, or sweet (*αἰσθηρός, σκληρός, λεπτός, γλυκός*).

An inferior kind of wine, drunk by slaves and peasants, was made by pouring water on the grape skins and squeezing them again, after the first juice had been pressed out; this was called *δευτερίας* or *στεμφυλίτης*. Pliny states also that the Greeks modified their wine by the addition of clay, marble, salt, or sea-water; some of these processes may be analogous to the modern custom of putting gypsum in wine to clear it; resin or pitch seems to have been sometimes put in wine, as is now the custom in many districts of Greece. Beer (*ζῦθος*) was known to the Greeks, but regarded as a barbarian product, and very rarely drunk by them.

Honey was used for all purposes for which we now use sugar, to sweeten both food and drink. The honeys of Hymettus and of Hybla were especially famous in ancient times; and both retain to the present day their characteristic flavour of wild thyme.

Honey.

692. The names and times of the various meals in Greece at different periods are matters of some dispute and difficulty; the reason lies mainly in the fact that the tendency of meals to be shifted to a later hour operated then as now, and that *δείπνον*, like our dinner, was transferred from a mid-day to an evening meal. It followed as a natural result that the *ἄριστον*, which in Homeric times was usually taken early in the morning, came to be eaten at mid-day; the Homeric *δάρπρον* or supper disappeared, as with us; and the breakfast, taken immediately on getting up, was the *ἀκράτισμα*, a piece of bread dipped in undiluted wine. This was, naturally, taken at home. The *ἄριστον* was a more or less informal meal like our lunch; busy people might eat it in

Times of meals.

the agora, or wherever they happened to be, while more luxurious people went home for it; and in later times it became a sumptuous entertainment, as appears in the New Comedy; but the *δείπνον* was regularly eaten

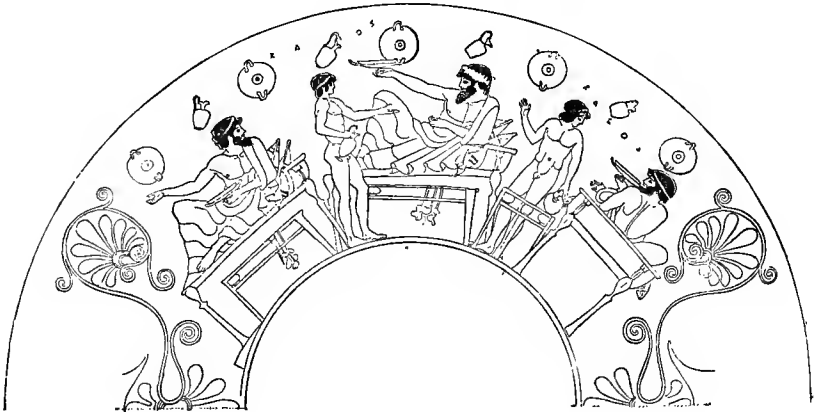


Fig. 157. Greek banquet; from a vase by Duris.

either at home or at a friend's house; this was probably in earlier times the only meal at which elaborate cooking and serving was provided, and at which company was usually entertained.

While rich men employed professional cooks of their own, a
 Cooks. Sicilian corresponding to a French chef of to-day, it was customary for the masters of less pretentious households to hire their cook in the market when they were buying their provisions for a dinner-party. On ordinary occasions, and for the *ἄριστον*, the mistress of the house, assisted by her slaves, usually saw to the provision and the preparation of the food.

693. When a man had no guests, his wife might dine with him, seated on a chair while he reclined on a couch. The dinner (*δείπνον*) was regularly served to guests in a room devoted to the purpose, and called the *ἀνδρών*. Representations of banquets are common on vases (Fig. 157), and give a good notion of how they were arranged. The guests reclined upon couches, often long enough to hold two or occasionally three; each had his left arm and shoulder propped on pillows, his right being free to help himself to food or wine. The food was served upon small movable tables, usually square in earlier times, later three-legged and round. When the guests entered their sandals were removed and their feet washed by slaves; then they took their places, either as they chose or as the host bade them. Water was poured by a slave over their hands, and then a separate table was brought in for each pair of guests,

Entertain-
ments.

with the dishes forming the first part of the dinner disposed upon it. These were usually of a very simple character in Athens, in contrast to the more luxurious diet of the Ionians and Sicilians, and were chosen for giving variety of flavouring to the bread with which they were eaten rather than as forming themselves a substantial meal. They were served out into small pieces, so that knives were not required; nor were forks or spoons generally used, solid morsels being picked up delicately with the fingers, according to a recognised etiquette, and sauces or other liquids being sopped up with a piece of bread (*μυστίλη*); bread-crumbs (*ἀπομαγαλαῖα*) was also used to clean the fingers, and afterwards thrown to the dogs.

Manner of eating.

694. Then these tables were removed, and others substituted, with fruit, cakes, and other dainties for desert (*δεύτεραι τράπεζαι*). The end of the dinner was marked by a libation of unmixed wine (*σπονδὴ ἀγαθοῦ δαίμονος*) which corresponded to grace after meat; and then usually followed the after-dinner drinking-party (*συμπόσιον*). The wine was formally mixed and prepared in the presence of the company, usually in three craters, and a libation was first poured from each, (1) to the Olympian gods, (2) to the Heroes, and (3) to Zeus Soter. This religious process was, like other sacrifices, frequently accompanied by the flute; it thus afforded a pretext for the introduction of flute girls at banquets, though the practice was continued for the amusement of the guests.

Symposia.

Where conversation did not suffice for the entertainment of the company, they played games such as capping verses and asking riddles (*σκόλια* and *γρίφοι*) or others requiring manual skill such as cottabus (*κότταβος*), which was played in many different ways; the essential thing always was the discharge of the 'heel-taps' (*λάταξ*, *λατάσσειν*) of a bowl of wine at some mark. For this purpose an open bowl (*κύλιξ*) without a raised rim had to be used; it was suspended by its handle on one finger, and its contents discharged by a sudden swing. The variety of the game depended upon the mark that was used. Sometimes it was merely a bowl or disc set up on a stand like a candelabrum; sometimes smaller bowls were floated in a larger one, and had to be filled; sometimes there was a scale which descended when properly hit, and struck an object below, often a little figure called *μάνης*. Not only was correctness of aim required, but the sound with which the *λάταξ* struck the bowl or other object was a sign of skill, and was also taken as an augury, especially in love-matters, a name being pronounced with the throw. The game is frequently represented on vases. Such amusements were often supplemented by the entertainments of hired performers. Later in the evening, the revels were sometimes diversified by the invasion of other parties (*κῶμοι*, *κωμάζειν*), or the guests sallied out to make similar incursions upon their friends.

Cottabus.

695. This description applies mainly to a banquet at a private house; to this the host invited his guests, but it was no unusual thing for others to drop in uninvited, and the invitation was

Common banquets.

usually a short and informal one. Banquets were often held also at times of sacrifice or other festal occasions, such as marriages; at some of these women might be present, being seated together. Such banquets were often held (especially by those who had small houses) in the sacred precincts, where dining-rooms were sometimes provided. It was a common practice also, both in the case of sacred banquets and of others, for the guests to contribute each his own share, either in money or in food (*ἔρανος*). These banquets varied in character, from the solemn feast of a religious association to a mere picnic by the sea-side, such as was a favourite diversion at Athens and elsewhere (*ἀκτάζειν*).

Public dinners were an institution in many towns. At Athens the Prytaneis for the time being and certain other privileged persons were fed daily in the Prytaneum; but it is not to be supposed that, except on extraordinary occasions, such as the entertainment of ambassadors, this implied anything like a modern civic dinner. At Sparta the common dinners for all citizens (*συσσίτια*) were notorious for their simple and frugal fare, which included the famous black broth; those present reclined on wooden couches; while the Cretans even kept to the severer custom of sitting at table.

D. EXERCISE, GAMES, BATHS.

696. Physical exercise (*γυμναστική*) was an essential part of the life of all free Greeks, and to it a considerable part of the day was devoted. It took place, for the most part, in buildings especially made for the purpose, called *gymnasia*, which were originally of a simple character, but grew in luxury and splendour until they became the elaborate structures of Hellenistic and Roman times. The essential requirements were a smooth space for wrestling (*παλαίστρα*), running and jumping, and rooms where men and boys could leave their clothes (*ἀποδυτήριον*), rub themselves with oil (*ἐλαιοθέσιον*), sprinkle themselves with sand (*κομιστήριον*), and have a cold bath afterwards (*λουτρόν*). To these might be added accommodation for spectators and for resting; such accommodation usually took the form of long porticoes surrounding a court, and giving protection from sun, rain, and wind. Such was the gymnasium of the best times in Greece; sometimes, as at Sparta, a piece of level ground beside a river sufficed. As to the arrangements of the numerous gymnasia in Athens we have but little evidence¹. In addition to the rooms above mentioned, there were usually a central hall (*ἐφηβείον*), and a tennis-court (*σφαιριστήριον*). The exercises of the gymnasium were varied in nature; some of them being merely for

¹ Gymnasia have been found at Olympia, Epidaurus, Troezen, Eretria, Priene, and elsewhere; they are mostly of the Hellenistic age, and are provided with water, bath-tubs, and foot-baths.

the sake of the physical exercise itself, while others partook more of the nature of games (see below), and others again were athletic in the narrower sense—that is to say competitive—such as running, leaping, wrestling, etc. These are spoken of more in detail in describing the great athletic festivals in which the competition ultimately culminated.

697. Among the Greeks games did not usually, as with us, form an essential part of physical education, although some of them were doubtless calculated to improve the strength or agility of those who took part in them. It followed that most of them were left to boys, or sometimes girls, and that grown men usually restricted themselves to more purely athletic exercises. This of course applies mainly to active games, not to cottabus and such other pastimes as were usually indulged in after a feast. Games with a ball were common at all times. The example of Nausicaa will occur to everyone; a σφαιριστήριον was provided for the maidens (ἀρρηφόροι) who had to live on Games with
ball, etc. the Acropolis at Athens; and in later times a kind of tennis was recommended as a gentle exercise for elderly men. There is however no clear evidence in ancient times for any games with conventional and elaborate rules such as exist at the present day, though something of the sort may be implied by the game called by Pollux ἐπίσκυρος, in which the boys were marshalled into three lines. Other recorded ball-games do not seem to imply more devices than any boy might invent for himself, such as high catch (οὐρανία), catching on the bounce (ἀπόρραξις), making a feint of throwing (φαινίδα), and so on. A kind of forfeit seems to have been combined with these and other games, the usual penalty being that the worsted competitor had to carry the victor on his back (ὄνος and βασιλεύς). Other pickaback games are represented on vases, the carrier being sometimes blindfolded, and having then to kick a stone.

Hoops were commonly used by children, and ring-stick was also played. Knuckle-bones (ἀστράγαλοι) were used much as at the present day; they were also marked with figures to serve as dice. Cubical dice (κύβοι), as well as these, were most frequently used for gambling and for casting lots, where we should toss up a coin. A more intellectual game was a kind of draughts, πέσσοι, a game preferred by older men; but though representations of the game and the board on which it was played have been found, its rules are still obscure; the ἱερὰ γραμμή, from which the pieces (λίθοι) were only moved in the last extremity, was in this game, whence came the saying τὸν ἀφ' ἱερᾶς κινεῖν; from this game also came the proverb πάντα λίθον κινεῖν, sometimes wrongly translated 'to leave no stone unturned'; it evidently means 'to bring all one's reserves into action.' For the game of cottabus see § 694.

698. Baths have already been referred to as a necessary adjunct of gymnasia; they also existed, at least as early as the fourth Baths. century, as separate buildings, some being public, some private. But elaborate baths, such as are familiar in Rome, were unknown

in Greece during the last period ; and we even find in the fifth century a feeling that warm baths are effeminate. But during the Peloponnesian War a change of sentiment seems to have taken place, and in the fourth century the custom of taking warm baths seems to have become practically universal. Baths (*πύλοι*) also existed in private houses, usually for the use of women. In the bathing scenes represented on vases (Fig. 158), the vessel containing the water is usually a basin mounted on a stand ; sometimes

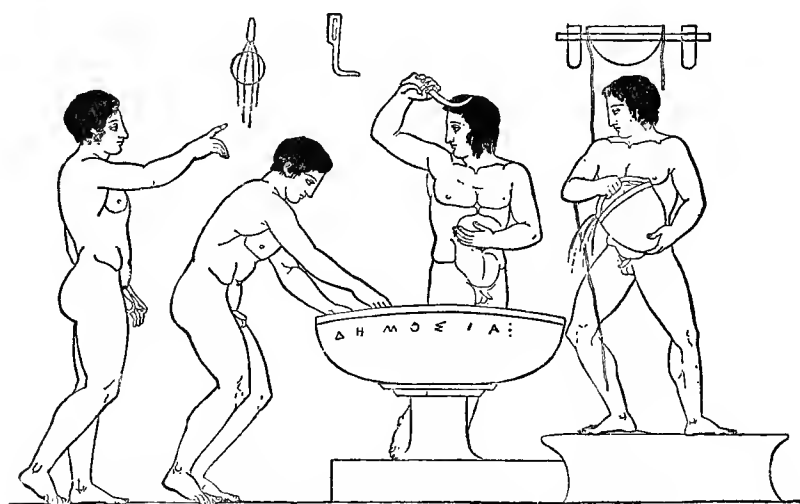


Fig. 158. Scene in a public bath ; from a vase.

water is poured from a jug by an attendant over a crouching figure. Similar scenes are represented also in the case of women's baths ; and a representation occurs even of a women's swimming bath (*κολυμβήθρα*). Douches were also obtained from the water flowing out of the lions' heads that discharged the water from a spring or aqueduct. The chief requisites for a bath were the oil-flask (*λήκυθος*), the sponge, and the strigil (*στλεγγίς*, *ξύστρα*), which each bather brought with him ; he also paid a small fee to the attendant (*βαλανεύς*).

E. TRAVELLING.

699. A habit of travelling appears to have been prevalent in Greece at all periods, especially among men. It was, indeed, necessitated by the religious and social conditions of Greek life.

The comparatively small distances that separated the various Greek cities, and the ties of friendship that connected at least their chief

Causes of travel.

families, made such a habit both convenient and agreeable. The common religious festivals offered frequent occasions for travel (see §§ 421 ff.). Political missions also had considerable influence; such commissioners were often ten in number, and any citizen was eligible to the office. These missions also frequently implied a visit to foreign lands. The amount of travel undertaken for commercial purposes must also have been considerable. Military campaigns also led men, whether as citizen-soldiers or as mercenaries, to see much of the world.

700. Travelling in Greece, and to a great extent outside it also, was greatly facilitated by the custom of guest-friendship. Such a connexion between families living at a distance from one another might often be accidental in its origin, but was strictly observed, and also hereditary. We find it already fully recognized in Homeric times, and ratified by an interchange of gifts. In the historical period it was amplified into the system of proxeny; the *πρόξενος* was the official host of a State, and his functions included hospitality as well as many of the duties of a modern consul; in return he was awarded both honours and substantial privileges by the State whose citizens he entertained. The duty of entertaining the stranger, who was regarded as under the special protection of Zeus *Ξένιος* was also recognized in all ages. But the claim to entertainment thus belonging theoretically to every traveller would naturally be liable to abuse upon frequented routes and in populous cities, and consequently other accommodation was required. In the great centres of religious festivals such as Olympia, and also more especially in sacred precincts like Epidaurus where patients slept as part of the healing rite, porticoes were provided for the shelter of visitors. Elsewhere it was usual for travellers to resort to an inn (*πανδοκείον*); but the accommodation provided in such places appears to have been very poor. If a man of any social position had to stay in a town where he had no friends, he usually carried his bedding with him—a precaution by no means unnecessary, if we may judge from the realistic enquiries Dionysus makes of Heracles in the *Frogs*, as to *ὅπου κόρεις δλίγιστοι*. Food of the simplest description only was provided by the hostess (*πανδοκείτρια*); and if a guest required anything more, he bought it for himself in the market, and brought it to the inn to be cooked. The attendance of a slave while travelling was therefore usual; and, as luxury increased, a rich man would not travel without a train of attendants.

Entertain-
ment of
travellers.

701. The means of travel in Greece were to some extent prescribed by the nature of the country. The sea presented by far the easiest and most obvious means of transport, not only to the islands or more distant countries, but even to other places on the mainland, since a short sail would often save a long and laborious journey over rough roads and mountainous passes. But the comfort of a sea passage, especially in rough weather, left much to be desired. In the best ages of Greece there was nothing like cabin accommodation

Means of
travel.

on ships, though rich men in the Hellenistic age may have imitated the luxurious yachts of the Ptolemies; but even then the ordinary traveller had nothing like privacy or comfort on a ship. On land, the traveller might either go on foot, on horseback, or in a chariot or cart; *φορέϊα*, litters, were only occasionally used before Hellenistic times, mostly for

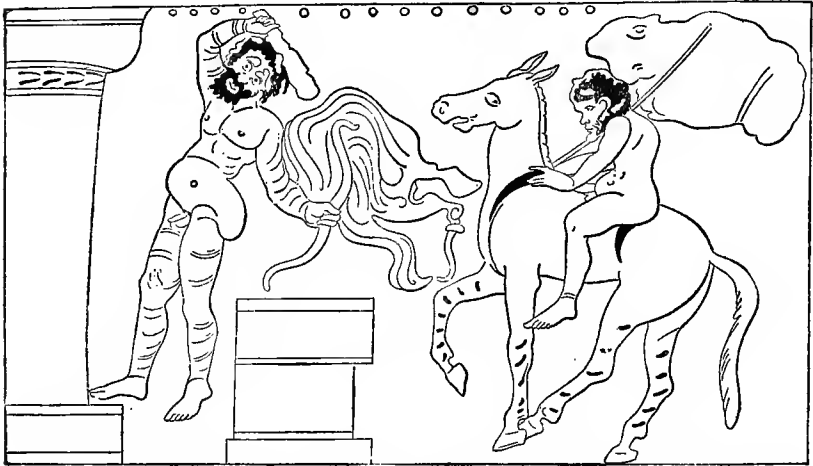


Fig. 159. Travelling; Dionysus disguised as Heracles, and the slave Xanthias with pack, on a donkey or mule. Scene from *The Frogs*, on a vase.

invalids. In the first two cases he would usually be accompanied by a slave with his baggage on a packhorse or a donkey. The roads in ancient Greece consisted as a rule merely of tracks worn over the land; in rocky regions—and most regions in Greece are rocky—two parallel grooves were cut for the wheels of vehicles to run in. Traces of such grooves may be found throughout Greek lands. The chariots and carts were consequently built with large wheels and high bodies. The horses having to pick their way over the rough track probably never went at more than a walk, except when they came to a piece of level plain; and the nature of the country and of the roads must have imposed the same pace upon riding horses also, as it does to the present day, except in the case of very sure-footed beasts which keep up a kind of amble over rough and smooth. Mules as well as horses were extensively used, and are indeed preferable for every purpose in mountainous country. Both women and older men usually drove when on a journey in a kind of travelling cart (*ἀπήνη*). And the constant reference in Greek authors to the use of such vehicles along what now appear to be impossible tracks is a constant source of surprise to those familiar with modern Greece. The drive of Telemachus and

Peisistratus from Pylos to Pherae, and thence in a single day to Sparta is perhaps the strangest instance, and might be supposed to show the poet's ignorance of the country; whatever identification of the sites be accepted, both the distance and the character of the roads make such a performance improbable; but journeys in a wheeled vehicle such as that of Laius from Delphi to Thebes or of Clytemnestra and Iphigeneia from Mycenae to Aulis seem not to be regarded as unusual. The only explanation seems to be that the travelling carts were built extremely light, and could go wherever a sure-footed beast could walk. Perhaps in some cases a track such as has been described would enable a cart to mount places now thought inaccessible without a regularly engineered road. It is however possible that such roads may have existed to a greater extent than is here suggested, and have disappeared as completely as the Roman roads that superseded them in some places.

Becker-Göll, *Charikles* (Becker, *Charicles*, English translation, antiquated); Iwan von Müller, *Die griechischen Privataltertümer*, being Bibliography. Vol. IV. A. 3 of his *Handbuch der klassischen Altertumswissenschaft*; H. Blümner, *Die Privataltertümer*, being Vol. IV. of Hermann's *Lehrbuch der griechischen Antiquitäten*; Baumeister, *Denkmäler des klassischen Altertums* (list of articles on 'Leben und Sitten' on p. 2184); Schreiber-Anderson, *Atlas of Classical Antiquities*; Mahaffy, *Social Life in Greece*; T. G. Tucker, *Life in Ancient Athens*; P. Gardner and Jevons, *Manual of Greek Antiquities*.

VII. 8. HOUSE AND FURNITURE.

702. OUR knowledge of the houses of Ancient Greece is derived from literature and from excavations. For the prehistoric age we have considerable evidence from actual remains, which, however, with few exceptions such as the palace of Cnossus, are little more than ground plans. The Homeric descriptions give us a later stage, the archaeology of which is for the present an insoluble problem. For the central period of Greek History there is less information, partly because the social life of the people existed mainly outside their houses and literary references to domestic arrangements are often not too clear, partly because, except for a few small houses in Athens, no houses of the period have been excavated. For the Hellenistic period we have a full description by Vitruvius, which, however, is by no means free from difficulties of interpretation, and important discoveries, especially at Priene and Delos, show us the walls of rooms still standing to a considerable height, the decoration of which is in many cases in good preservation.

Sources of
knowledge.

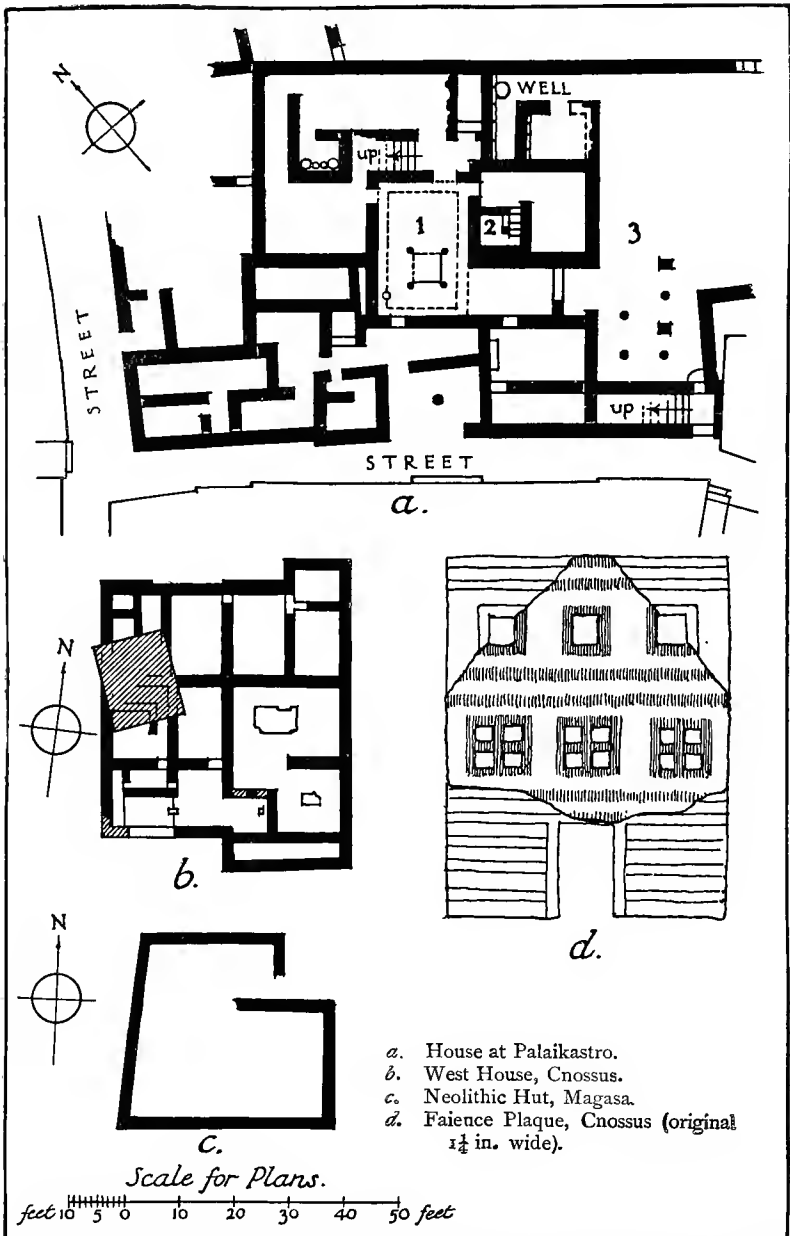


Fig. 160. Minoan Houses, Plans and Elevation (after the *Annual of the British School at Athens*, Vol. vi. Pl. vii; Vol. viii. pp. 15, 17, Figs. 8, 9; Vol. ix. Pl. vi; Vol. xi. p. 263, Fig. 2).

703. In dealing with the remains of prehistoric houses found in Greek lands we may make three divisions, those in Crete and the islands, those in South-Eastern Greece with kindred types elsewhere, and those in North-Eastern Greece. In Crete and the islands the primitive house was probably a one-roomed rectangular hut with a flat roof, similar to a modern peasant's hut. The earliest example found is a hut of the neolithic age at Magasa near Palaikastro (Fig. 160 *c*). This is rectangular with a stone foundation, which probably carried a superstructure of mud-brick strengthened by rough timbers. One interesting feature of this hut is that it has already two divisions, an outer porch-like room and an inner living-room. The houses however probably were not all of a uniform type. At all events two early Cycladic round hut-shaped boxes from Melos and Amorgos show that round huts were known in the Cyclades. The supports on which these vases stand should not be taken as meaning that they represent lake-dwellings. They are merely the legs of the vases, for Crete and the Cyclades are very unsuitable for lake-dwellings. No actual round huts have yet been found, unless we take the beehive tombs in Crete and elsewhere as an indication of their existence. Mackenzie has shown that the oval house at Chamaizi is merely a variation of the ordinary more developed Minoan house, and not an independent type.

The pre-historic house in Crete.

704. The earliest Minoan houses are those found at Vasilike, which date from the later Early Minoan age, and even these are of rather an elaborate type like the houses of a much later date (of Middle and Late Minoan times) excavated in the towns at Gournia and Palaikastro. The smaller houses are rectangular, but do not seem to possess any definite plan (Fig. 160 *b*). There are several rooms which are all small and usually intercommunicate, but except in the larger houses no clear design is discernible. The larger houses (Fig. 160 *a*) to judge by the remains of staircases and the evidence of some faience plaques (Fig. 160 *d*) from Cnossus had at least one other storey above the ground floor. They consist of a large number of small rooms, among which a bathroom (Fig. 160 *a*, 2) frequently occurs, often arranged along the side of a court (Fig. 160 *a*, 3). In the centre of the house (Fig. 160 *a*, 1) in order to give light to the living rooms of the ground floor there is a light-well, a central space open to the sky and surrounded by a verandah, the roof of which was supported by four pillars at the angles.

Minoan houses.

705. The great palaces at Cnossus, Phaestus and Hagia Triada are elaborations of the ordinary house plan. The palace at Cnossus (Fig. 161) is grouped round a large central court (12) which has an altar in the centre. At the north end of the court is the public entrance to the palace connecting with a paved roadway, and to the west of this entrance lies the 'theatral' area (probably used for ceremonial receptions) with long tiers of steps on two sides. To the south of the central court is another entrance, probably for private use, connected with a broad terrace from which a long gallery (4) leads to the north

The Palace at Cnossus.

into a west court beyond the magazines. On the west of the central court lies what may be called the official and religious part of the palace. Here is the throne room (14) with the stone throne still *in situ*, where kings of the house of Minos probably sat in judgment. In the centre of the block opposite the altar of the central court and on the first floor was the great palace shrine of the snake goddess. On the ground floor fronting the court was a small shrine with wings similar to that shown in the

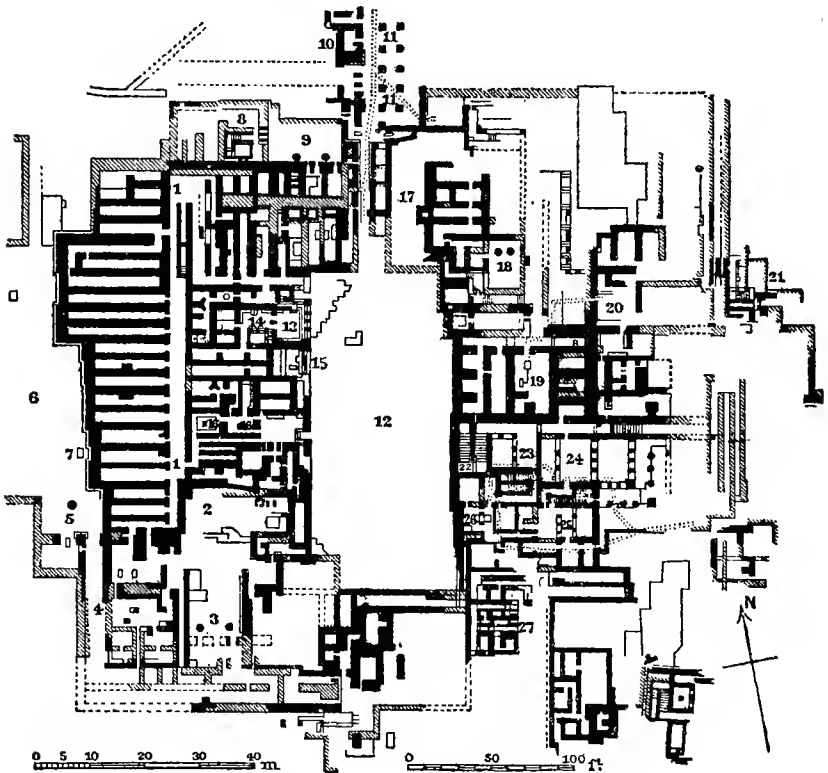


Fig. 161. The Palace at Cnossus.

reconstructed fresco (Fig. 22, cf. § 298). Any fresh discovery seems to bring out more and more clearly the religious character of this part of the palace. The same block, too, has yielded great stores of inscribed tablets, many of which seem to be inventories of royal stores or tribute. These may be connected with the long gallery of magazines (Fig. 161, 1) which lies at the back of this block. Here still stand long rows of store jars where the royal tithes of oil, wine and corn could be kept; and let into the floors of the magazines and galleries are stone-lined cists which served as

supplementary stores. The corridors were lighted, when necessary, by torches stuck in the pyramidal holders which can still be seen. Over the small rooms about the throne room there was an upper floor reached by staircases and, where necessary, the rooms of the ground floor were lit by light-wells. To the east of the central court lies the domestic quarter of the palace, which contained three stories approached by the great staircase (22) rising against the middle of the east side of the court. On the ground floor here are the rooms to which are applied the names 'The Queen's Megaron' (25), 'The Hall of Colonnades' (23) and 'The Hall of Double Axes' (24), all lit by light-wells. Connected with these are (26) bathrooms, latrines and an elaborate system of drainage which strike a curiously modern note. Here too is a small chapel, 'The Shrine of the Double Axe,' for the private devotions of the inhabitants of the palace. It is very noticeable that none of the rooms except 'The Hall of Double Axes' can really be called large. Of what appears to have been the Great Palace Hall, north of the 'Domestic Quarter,' only the basement spaces remain. The splendid high-reliefs of painted stucco seem to have been derived from this Hall.

706. In the Cyclades, to judge by the evidence from Phylakopi in Melos, the usual house was a two-roomed building. There was a small outer room and a larger inner or living room. The Cyclades. Sometimes, especially in the later houses, the two rooms have separate entrances and do not communicate with one another directly. The palace at Phylakopi is not of the Cretan, but of the Mycenaean type of the mainland, like those at Tiryns and Mycenae. The presence of Mycenaean and not Minoan megaron in the Third Late Minoan period in Melos, and at Phaestus, help to emphasize the supremacy of the mainland after the fall of the Cretan thalassocracy.

707. In South-Eastern Greece the principal remains are the palaces at Tiryns and Mycenae, since there is no evidence for private houses except a simple two-roomed house at Mycenae. South-Eastern
Greece,
Tiryns. The palace at Tiryns (Fig. 162) is excellently preserved in its ground plan, and splendid examples of the painted stucco decorations of its walls and floors have been found. Recent excavations have shown that this palace of the Third Mycenaean period was built above another of the preceding age. The palace area occupies the highest or southern part of the citadel, and is entered by a large propylaeum on the east, which is approached by a road leading direct from the great gate in the wall. The large propylaeum, faced on both sides by two columns *in antis*, leads into a forecourt (A); and from this a smaller and similar propylaeum leads into the courtyard proper (B) which contains an altar. Facing the altar, and directly to the north, is the entrance to the principal megaron (C). This has a porch faced by two columns *in antis*, behind which is another room entered by three doors and serving as an ante-chamber to the main room beyond. The hearth was in the centre of this latter room, and round it stood four pillars supporting the roof. To

the west of the main hall are many small rooms, including a bathroom. To the east is another and smaller megaron (C') which has two courts (A', B') in front of it, and a number of small rooms on its eastern side. The usual explanation is that the larger megaron was that of the men and the smaller was that of the women. But there are serious objections to this view, for the only communication between the two megara is a long, narrow and tortuous passage running from the bathroom area right behind the larger megaron and approaching the smaller megaron from the west. At Mycenae and at Phylakopi only one megaron was found, and therefore

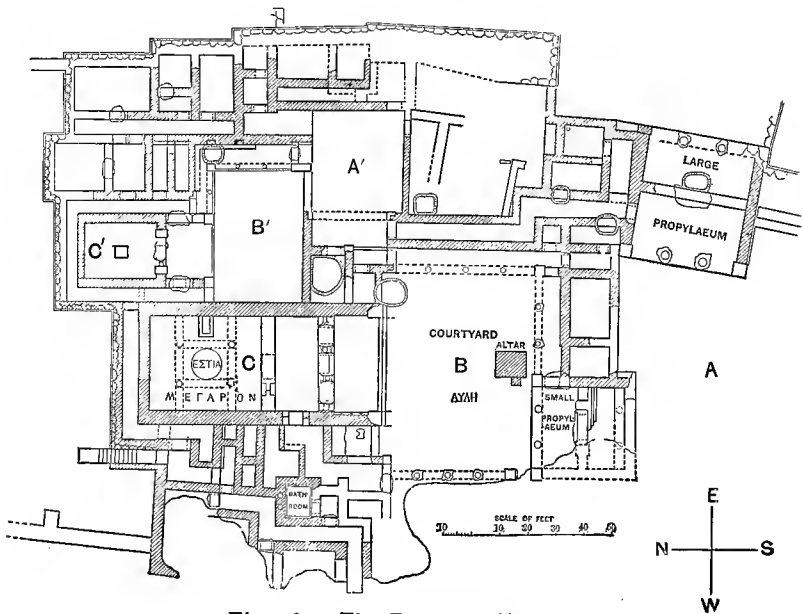


Fig. 162. The Palace at Tiryns.

- | | |
|-------------------|----------------------|
| A A'. Outer court | } of the two houses. |
| B B'. Court | |
| C C'. Megaron | |

it seems more reasonable at present to take the two megara at Tiryns as two palaces within the same area, the larger being that of the king and the smaller that of his heir or grand vizier. Palaces of this type are essentially different from those of Crete. On the mainland and, apparently, also at Troy, even as early as the second city, there is the megaron type, a large central hall of uniform plan with a forecourt and a few smaller rooms attached to it. The likeness of the Trojan palace to those in Argolis may point to early Asiatic influence in Greece. The Cretan palaces are true labyrinths, long galleries of small storerooms and great complexes of

comparatively small-sized living rooms of ever-varying shapes in one or more stories, all grouped under one roof on the sides of a large central court.

708. In Northern Greece the evidence from the few house-plans so far known does not go to show that there was any uniform type at any period. At Orchomenus in the first stratum the huts were round, and their structure was of mud-brick or wattle and daub on a low stone foundation. In the second stratum at Orchomenus the huts are oblong with one apsidal end, and in the third stratum no complete house has been found, but enough has been discovered to show that the houses were rectangular and had a courtyard and more than one room. In the first Thessalian period (§ 295) at Tsangli and Sesklo rectangular huts have been found which had a superstructure of mud-brick and timber on a low stone base. In the second Thessalian period the houses found at Sesklo and Dimeni are of a megaron type. There is a porch with two columns *in antis*, and from this a narrow door leads into the main room, the roof of which was supported by two or three wooden posts in the centre. Behind this was a smaller back room, in which constructions resembling ovens were found. In the third period at Rakhmani an oblong hut with one apsidal end was found, and at the same site an exactly similar house of the fourth period was excavated, while at Rini there is a hut with two apsidal ends also of the fourth period. Lastly, at Lianokladi, in the same period, a house somewhat similar to the megaron type was found. It thus remains for further excavations in this area to show if there is any ethnological law to explain this great variation in house-types. It must further be noted that oblong houses with one apsidal end have been found in North-Western Greece at Olympia, at Thermon and in Leucas, though one cannot yet determine whether they are contemporary with the Thessalian examples or not.

709. Of the various types of houses described above, the megaron type as at Tiryns, though presumably anterior in date, corresponds best, though not exactly, with the Homeric house. The essential parts of a house, according to the Homeric poems, are the court (*αὐλή*) having in the centre the altar of Ζεὺς Ἐρκεῖος and the hall (*μέγαρον*) with a central hearth (*ἔστία*, *ἰστίη*, *ἔσχαρα*) surrounded by the columns supporting the roof (cf. *Od.* vi. 307). The court served as a farnyard, and was surrounded by sheds which were used as workshops, such as mills for grain, and as rooms for the male slaves, and seem to have included stables as well. The court had a great gate leading into the street, and on its south side was the hall (*μέγαρον*) itself. Directly against the court was a portico (*αἶθουσα*), so called because it was the place for sunning oneself (*Od.* iv. 297, 302). Between this and the hall proper was an ante-room (*πρόδομος*). The great hall behind this was the living room of the family, and also the bedroom of its lord and his wife (*Od.* iii. 403), while guests slept in the porch (*Od.* iii. 399, iv. 302). It is only in the palace of Odysseus that there were separate women's quarters, which lay

behind the hall and were apparently connected with it by a side door (*δροσθήρη*). There were storerooms and workrooms for the female slaves, but it was a common practice for the lady of the house to bring her work and attendants into the hall as Penelope did. A separate bedroom for the master and mistress of the house existed in Odysseus' palace, and there seems to have been one in the house of Menelaus as well (*Od.* iv. 121). From the hall a narrow passage (*λαύρη*) led past it to the rooms behind, as seems to have been the case at Tiryns. The rooms at the side probably included a bathroom—a bath was always offered to a guest on arrival (*Od.* i. 310, iii. 464, iv. 48)—for it is here that we find the bathroom at Tiryns. Other rooms included a treasury (*θησαυρός*), which was in the upper storey of Odysseus' palace. A second storey seems to have been common, but little is known of its arrangements or position, though from the account of Odysseus' palace the upper storey seems to have been the favourite place for Penelope to sit. At all events, it does not seem to have been above the hall. The hut of Eumaeus (*Od.* xiv. 5 ff.) gives a picture of the peasant's house. This had a court serving as a farmyard with stalls round it, and on one side the house itself, consisting of a porch (*πρόδομος*) and an inner room to live and sleep in, which contained the hearth. This arrangement is a development of the plan of the neolithic house at Magasa, which in its turn represents an advance on the hypothetical prototype.

710. The Greek house of historical times differs in many respects from the Homeric palace, but it is probably to be regarded as an

House of his-
torical times.

independent development from the same original and simple type. This type consists of an open court, surrounded by chambers and also, in more elaborate examples, by a cloister; and having, usually on the side facing south, a large recess or open hall, which served as an ante-room to the principal living room. This recess was called the *προστάς* or *παστάς*, and is frequently referred to. The aspect of a house was regarded as a matter of the greatest importance, because, as Xenophon makes Socrates say (*Mem.* iii. 8. 9), 'in a house facing south the sun shines right into the *παστάς*'; and he also recommends that 'the parts facing south (*i.e.* on the N. side of the court) should be built high, to catch the winter sun, and that those facing north (*i.e.* on the S. side of the court) should be built low, so as not to catch the cold winds.' These instructions bring home to us the difference between a Greek and a modern house; while we think of the external aspects, and the windows that face outward on each side, a Greek regards a house from inside, and thinks of the various sides that face into the court in the middle. The outside of the house was probably, in most cases, contained by mere blank walls. There is no doubt that the Court corresponds to the Court of Homeric times (*αὐλή*); the same word is applied to it *e.g.* Plato, *Protag.* p. 311 A; and sacrifices were made in it at the altar of Zeus Ἐρκείος (*Id. Rep.* 328 C). If, as we have seen reason to suppose, the *παστάς* and principal room correspond to the *αἶθουσα* and *μέγαρον*, we should expect the room to contain the *ἑστία*, but we have no

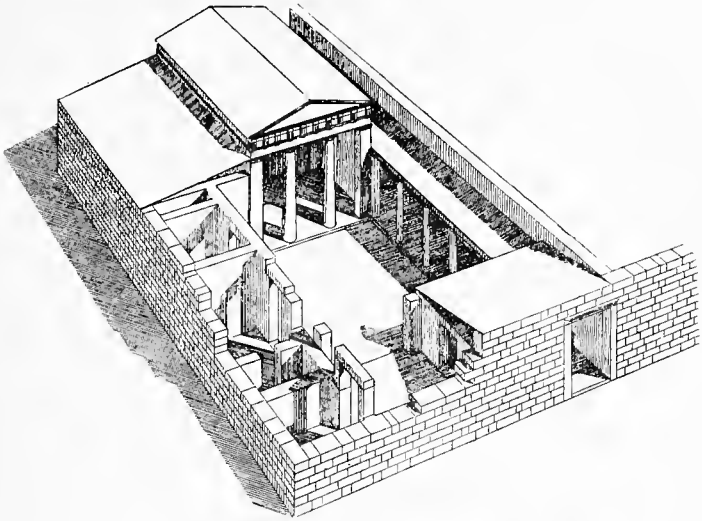


Fig. 163. Restoration of a house at Priene. (Reproduced by permission from Wiegand and Schrader, *Priene*, Fig. 299.)

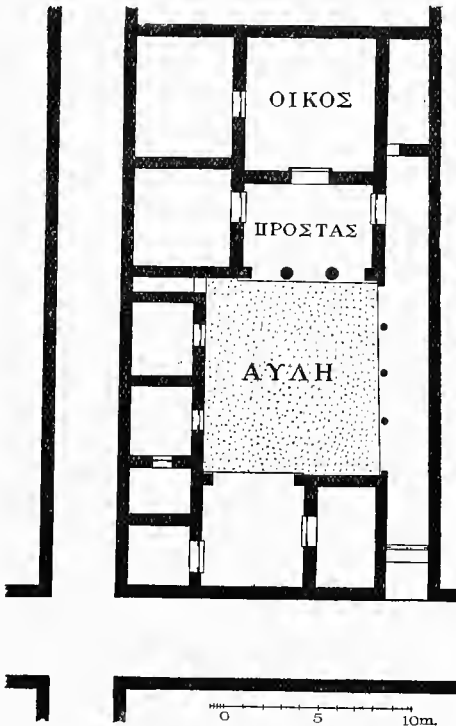


Fig. 164. Plan of above house (*ibid.* Fig. 298).

certain evidence as to this. Since it was most important that the *παστάς* should face south, while the conditions of situation, especially in towns, often necessitated a front door facing in some other direction, the *παστάς* was sometimes at the side of the court. The excavations at Priene, which have laid bare the plan of an ancient town with remarkable completeness, show houses which usually conform to a regular type, as may be seen from the plan and restoration here given (Figs. 163, 164, 166). They consist of an open court, with a principal room, usually on the north, faced with a columned porch or ante-chamber; the other principal rooms were usually beside this, and smaller rooms, for slaves or storage purposes, were placed round the

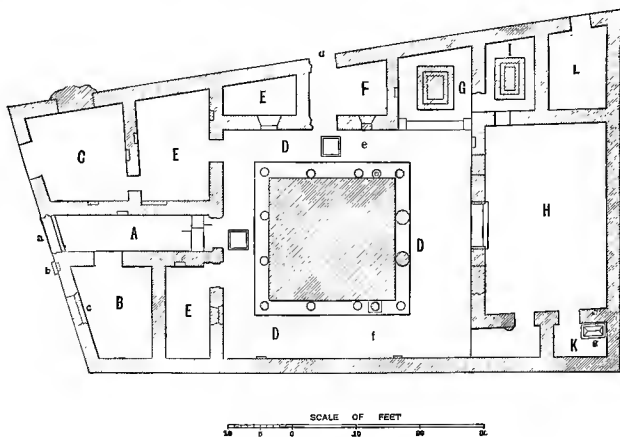


Fig. 165. House on Delos (Rue du Théâtre), (after *Bulletin de Correspond. Hellénique*, xix. Pl. V).

(This description follows in the main that given by the excavator, M. L. Couve.) A. Passage of entrance (*θυρωρείον*). B. Porter's lodge. C. Shop with two doors at corner of street. D. Peristyle, or court (*αύλή*), with mosaic. E, E. Chambers, probably for domestics, etc. F. Well of staircase, leading to upper floor. G. Recess in sheltered corner (corresponding to usual *παστάς*), with mosaic. H. Large reception room (*ἀνδρών*), with mosaic. I. Winter dining-room, with mosaic. K. Small chamber. L. Detached room or shop. a. Front door. b. Niche for lamp. c. Window. d. Side-door. e. Well. f. Opening into cistern. g. Marble trough.

court. The original plans of these houses may date from the laying out of the city in the fourth century B.C., though many of them were modified later. The Delos houses (Fig. 165) mostly date from the second century or so, and mostly show a later modification such as we find also at Priene, the court being surrounded by a colonnade on all sides; but in the plan of a Delian house here given the larger size of the columns in front of the principal room seems to show that they once belonged to a portico in front of it such as we see at Priene. A curious feature in several of the Delian houses is an open recess, usually placed in the most sheltered and

sunny position, in the N.E. corner of the court; this must have served as a sitting-room, and was perhaps a modification of the *παστάς*. The house at Priene (illustrated above, Fig. 164) was subsequently joined to another house, presumably to form a *γυναικωνίτις* and *ἀνδρωνίτις* as described by Vitruvius, and shows also a modification of plan, such as we see at Delos (Fig. 166). It is likely that most of the houses at Delos and Priene had a second storey, containing the more private apartments. The large room which is a feature in most of the Delian houses probably served for the entertainment of guests, and so may be identified as the *ἀνδρών*.

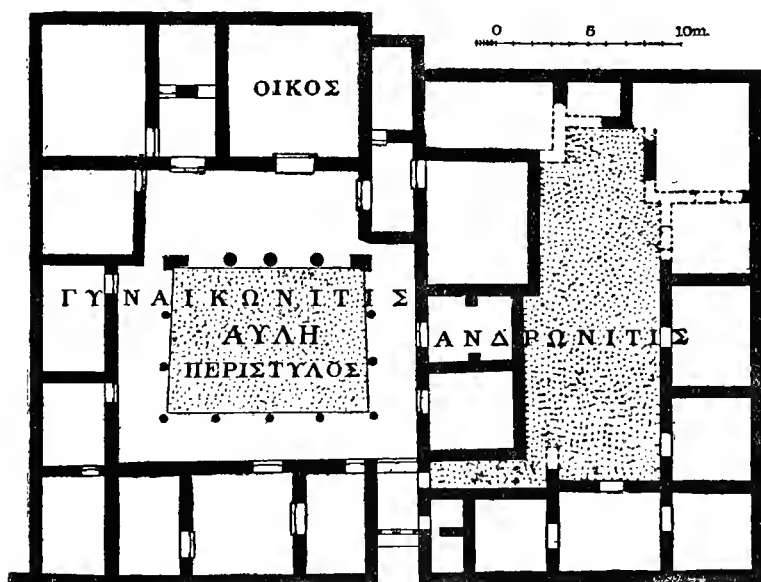


Fig. 166. Plan of House at Priene. (Reproduced by permission from Wiegand and Schrader, *Priene*, Fig. 316.)

711. So far we have been concerned mainly with the simplest form of house, consisting of a single court and surrounding rooms. Such was probably the usual form of house in the fifth and fourth centuries. Vitruvius, who describes in detail the plan of a large house of Hellenistic age, calls the court, with the *παστάς* and surrounding chambers, into which the front door opens by a corridor (*θυρωρείον*), the *γυναικωνίτις*; to this, he says, was added a richer peristyle, surrounded by larger chambers; this peristyle had a separate entrance, and was in every way more sumptuous; it was called the *ἀνδρωνίτις*, and was intended for the entertainment of male guests. Its peristyle was often loftier on the side facing south. It is

House of
Hellenistic
times.

not to be supposed that all these sumptuous arrangements were to be found in houses of the fourth century—much less in the fifth. Demosthenes (*Olynth.* 3. 25) says that the great men of the fifth century were so frugal in their private life that ‘even if you knew which was the house of Aristides or Miltiades or other famous men of old, you would see that it made no pretensions beyond its neighbours.’ But the elaborate entertainments given by a rich man like Callias (*Xen. Conviv.*; cf. Plato, *Protag.*) imply correspondingly extensive accommodation; and it was probably considered necessary in the fourth century for a man of any position to have special rooms for entertainment. The women usually had separate quarters, shut off by a door called the *μέταυλος* or *μέταυλος θύρα*. Into these they retired at night, and also when guests were present; but at other times they occupied the *αὐλή*. Sometimes the women’s rooms were above the men’s; for we hear of a man who exchanged quarters with his wife, and gave her the ground floor while he took the first storey (*Lysias, de Caede Eratosth.* II. 3). Euripides mentions a suite of rooms with a separate entrance for guests (*ξενῶνες, Alc.* 543). Poorer people must have been content with only a room or two, or a portion of a house (*συννοικία*, see § 682). Over-crowding in cities was at least as bad then as now, and many people must have had to dispense with what seemed to their richer contemporaries the decencies or even the necessities of life. Beyond the main features, we know but little of the parts of a house; the same confusion as in earlier times exists in the application of the word *θάλαμος*, which is sometimes the whole women’s quarters, sometimes the best bedroom; this and the *ἀμφιθάλαμος* are placed by Vitruvius on either side of the *pastas*.

712. The material of which houses were built was usually sun-dried brick. Even the palace at Tiryns was made of this; and what is preserved is, for the most part, the stone foundation on which the walls stood. It was very easy in the fifth century to dig through the wall of a house. We hear that the Plataeans concentrated their forces in this way without appearing in the street (*Thuc.* II. 3); hence also the common word for a burglar, *τοιχωρύχος*. The walls were probably, at least in the better houses, covered with stucco on the inside. At Tiryns and Mycenae we find the stucco adorned with fresco paintings: the practice of painting the walls came in again towards the end of the fifth century; Alcibiades employed for this purpose the painter Agatharchus, whom he kidnapped and forced to do the work. Socrates complains of the custom, saying that ‘pictures and decorations in a house deprive us of more pleasures than they can give’ (*Xen. Mem.* III. 8. 10). But it became more and more prevalent in later times. Relief ornament in stucco was also common; in Delos we find stucco imitating courses of stone, and also artificial marbling, evidently a cheap substitute for marble panelling. Columns, doors, and other structural parts were commonly of wood in early times, though of course marble came to be substituted in more sumptuous

Materials of
houses.

houses. The roof was often flat, and so supplied a vantage-ground in street fights; it was generally of hardened mud, as now frequently in the East; but tile roofs were also common, and the tiles served as convenient missiles. The floor was usually of hardened earth in early times; thus

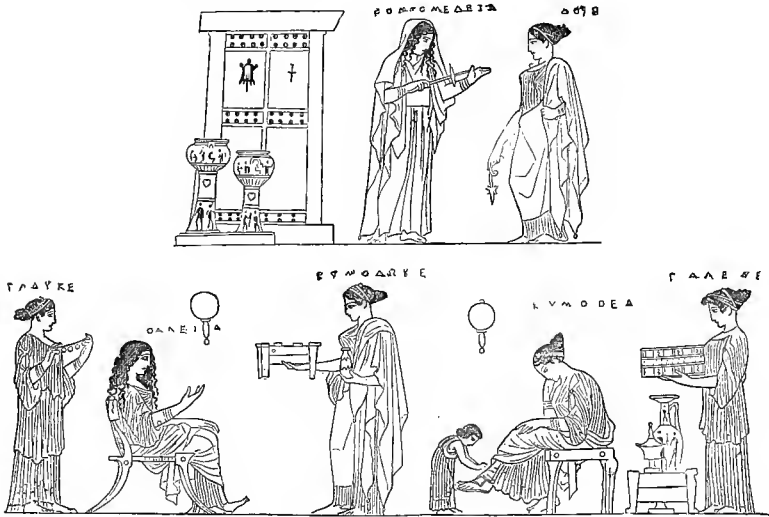


Fig. 167. Scene in a Greek house, showing furniture, etc.; from a vase.
[The scene is continuous on the vase.]

a trough could be dug in it for the axes in the Hall of Ulysses (*Od.* xxi. 120). Both paving stones and plaster floors are found in early buildings. A floor of pebbles set in cement is found in houses as early as the fifth century in Athens. In Hellenistic times these floors had elaborate patterns, and developed into mosaic at Alexandria.

713. Greek houses were probably very bare of furniture, according to our notions. Beyond beds and couches, chairs, stools, foot-stools, and small portable tables, they do not seem to have had anything that we should call furniture—except chests in which to store clothes and valuable articles. All kinds of vessels or utensils were either laid on the floor or hung on the walls. When any things were required, for instance washing appliances, a slave probably brought them and held them during use. The contents of a country house are thus enumerated and classified by Xenophon (*Oecon.* 9. 6);—implements of sacrifice, women's clothes and ornaments for festivals, men's clothing for festivals and war, mattresses and coverlets for the women's quarters and for the men's, women's shoes, men's shoes, weapons, implements for spinning, for grinding corn, for cooking, bathing utensils, kneading troughs, table

Furniture and
vessels, etc.

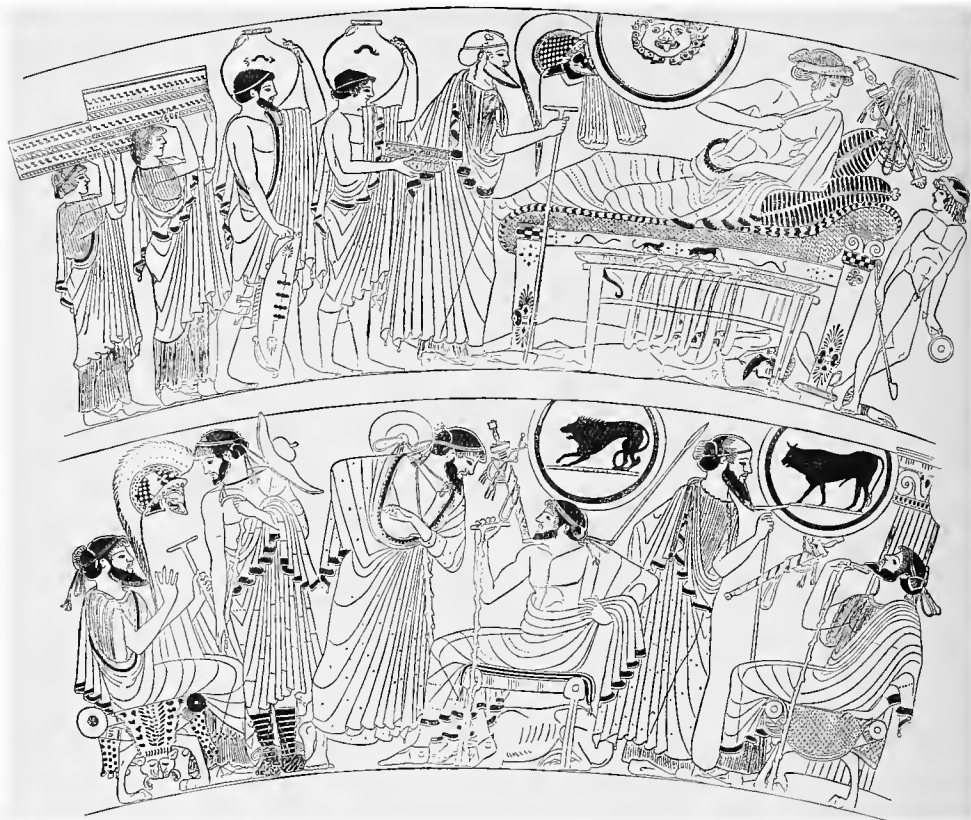


Fig. 168. Priam and Achilles, and scene in a house, showing chairs, couch, table, etc.; from a vase.

service. The way in which Ischomachus describes how he and his wife sorted all these and assigned to each class a special place in the house seems to imply that no proper fittings or appliances were usually provided for their storage. In fact, a Greek house would probably have appeared untidy and disorganised, if judged by a modern western standard, though doubtless a good housewife introduced order into the chaos. The majority of the articles above classified do not call for detailed notice here; but it is a disputed question how far we are to consider the well-known Greek painted vases as articles of household furniture and use. Many may have been especially made either for export or for dedication; but the representation, in household scenes painted on the vases, of similar painted vases in actual use, seems to place beyond a doubt the fact that they were sometimes so used, and the inscriptions referring to drinking on cylixes also

imply that they were for use. It is probable, however, that metal vessels were also extensively used for table service, and these were of silver or even of gold in the more luxurious houses.

For the prehistoric house the following works may be consulted: Bosanquet and Dawkins, *Palaikastro*, *B.S.A.* Vol. VIII. ff.; Boyd-Hawes, *Gournia*; Bulle, *Orchomenos I*; Dörpfeld, *Troja and Ilion*; Evans, *Knossos*, *B.S.A.* Vol. VI. ff.; *Nine Minoan Periods**; *Restored Shrine of Knossos*, *J.R.I.B.A.* 1911; *Prehistoric Tombs of Kuossos*; Halbherr and others, *Phaestos, Monumenti Antichi*, from 1902 onwards; Hall, *Aegean Archaeology*; Mackenzie, *Cretan Palaces*, *B.S.A.* Vol. XI. ff.; Noack, *Homerische Paläste, Ovalhaus und Palast*; Schliemann, *Tiryns*; Schuchhardt, *Schliemann's Excavations*; Seager, *Mochlos*; Seymour, *Life in the Homeric Age*; Tsountas and Manatt, *Mycenaean Age*, 2nd Ed.*; Wace and Thompson, *Prehistoric Thessaly*.

For the house of historical times see the authorities quoted on p. 649; and also Winckler, *Wohnhäuser der Hellenen*; Lange, *Haus und Halle*; L. Couve, *Bulletin de Correspondance Hellénique*, XIX. (Houses on Delos); Wiegand and Schrader, *Priene*; J. L. Myres, *Journal of Hellenic Studies*, XX. 'On the plan of the Homeric House'; E. A. Gardner, *Journal of Hellenic Studies*, XXI. 'The Greek House.'

Note. Works marked thus * were not published when this article was written.

VII. 9. MEDICINE.

714. OF Greek medicine before the sixth century B.C. we should know little, almost nothing, were it not for the *Iliad* and the *Odyssey*. In the long course of Aegean civilization medicine may have contained the following elements: (a) fetish medicine; (b) demon medicine, which may have reached Eastern Europe from the Accadians; (c) theurgic, or 'temple medicine,' which may have had its origin in Egypt; and (d) a rough but not inconsiderable knowledge of surgery, learned for the most part in the battlefield and owing little to a study of anatomy. This fourfold system was rolled back, though not vanquished, by the more scientific medicine of Hippocrates and, later, of Alexandria. It is often supposed that scientific medicine sprang full-grown from the head of Hippocrates, for whom the way had been prepared by the Ionic schools of philosophy, and especially by Heracleitus. However the names of a large number of physicians before Hippocrates are given in the so-called Aristotelian ms. of Menon; and older medical treatises are referred to in the Hippocratic collection. The disciples of Pythagoras are said to have dissected animals. His chief medical disciple was Alcmaeon of Crotona, the Father of Greek Medicine. The works of Alcmaeon are lost, but he exercised great influence upon Empedocles, Democritus and Anaxagoras (§ 720).

Medicine in general.

Theurgic medicine knew many gods and heroes also, such as Cheiron, Asclepius, Podaleirius and Machaon; yet it rose far higher than the fetish medicine of the Etrusco-Romans: indeed Paeon, Apollo (in his medical attributes), Eileithyia and Hygieia soon paled before the worship of Asclepius, which seems to have originated in Thessaly, and not to have reached Athens till about 420 B.C. In Homer Asclepius was a mortal chieftain, who seems to have had the root of science in him. Like Achilles he was a disciple of Cheiron; and in his turn taught medicine to Podaleirius and Machaon, chieftains of his own rank and kind. We may note that for the pestilence Calchas had no concern with medical remedies.

715. The apotheosis of Asclepius came later, and many temples were raised to him. We have record of about one hundred; those best known to us by their surviving relics were in Temple medicine. Cos, Pergamum, and Epidaurus. Recent excavations in Cos have brought to light remains of an Asclepian temple with cells, the base of a statue, and the foundations of a well-house. If Tricca was the most ancient of the medical temples, Epidaurus was the largest, and the mother of many such health-resorts in Greek lands. These Asclepieia, whither, as to hospitals or spas, the sick were gathered together, were situated in places of fine air, pure water, and exhilarating scenery. In or near some of them were medicinal springs. There, beside religious rites, other physical and moral influences—such as the drama, games, social amusements, diet and gymnastics, and, perhaps, a few drugs—were brought to bear upon the sick in mind or in body, as they are to-day at Harrogate or Aix-les-Bains. At these resorts the effects of 'Airs, Waters, and Places,' and of regimen, as well as those of mental exaltation, diversion or repose, were keenly observed by the positive Greek mind, and the results of these more natural methods quickly distinguished from those of priestly ritual. Thus medicine found its place as a branch of natural knowledge, a place which, after Galen, the last of the great Greek physicians, was diminished till the coming of Vesalius and Harvey.

716. At many of these resorts were medical schools, of which those of Medical Schools. Ionian tradition, such as Cos and Cnidus, are best known to us. There were also ancient schools of medicine in Rhodes, and in Magna Graecia, Sicily and Cyrene. The school of Cnidus seems to have been of a dialectic and speculative bent; that of Cos laid stress rather on careful bedside observation, and on the study of atmospheric, telluric, and other external conditions. The doctrines of the Greek physician were in conception often erroneous but not often unscientific. His recognition of disease as a perversion of normal function, his vigilant reserve, his subordination of his art to the indications of nature, and his reliance on the *vis medicatrix naturae* were in accordance with the best practice of modern times. The medicine of Plato (*Timaeus*), though far from Hippocratic, was not quackery or superstition. Aristotle, himself

a physician who held a public medical office, and the son of a great physician of the seed of Asclepius and Machaon, owed much to Diocles of Carystus; and was destined to hold a perennial ascendancy over medicine, almost to our own day. If we may judge by the evidence of Celsus, the sane and natural method of Hippocrates prevailed until and probably throughout the Alexandrian period; after this period it gradually gave way to a medicine of tradition, formulas and logical categories. On the other hand Hippocratic medicine knew little of anatomy, the study of which was pursued in Alexandria with brilliant success. Physiology, the science of living function, developed by Erasistratus in Alexandria, was founded upon experiment by Galen (d. A.D. 200), but on his death fell into oblivion till thus founded again by Harvey in the seventeenth century.

717. That, as is generally stated, rational medicine was an offshoot of theurgic (temple) medicine is not true; the modern visitor to Epidaurus may readily observe that the temple ritual was but a part, and by no means an overwhelming part, of the splendid apparatus built up by the managers, lay and sacerdotal, of these health-resorts. Indeed of the existence of a priesthood, as a separate class, we have no definite evidence; though there are occasional indications in Greek literature that priest and physician acted together in some jealousy or rivalry. In Homer no sick Greek or Trojan was carried off to a temple. The temple methods may have been engrafted upon an ancient stem of secular medicine, Ionian or mainland, an alliance not inconvenient in a people so little superstitious or priest-ridden as the Greeks; but in all probability professional and sacerdotal medicine were distinct. Celsus gives honour to Hippocrates for the separation of medicine from philosophy, but he is silent as to any connexion of medicine with religion. Even Herodotus avoids the supernatural origin of disease.

Rational
medicine.

718. Of the means used by the priests in the cure of disease we know little precisely, but much may be supposed. By pomp, splendour, and ancient enchantments, the senses were captured and the springs of nervous energy unsealed; sorceries and impostures, which find their way into all great rituals, may have entered more or less into their system. And of such inspirations and suggestions the physicians probably availed themselves, directly or indirectly: it is supposed that mesmerism was a potent means in the hands of the priesthood; that patients were subjected to hypnotic suggestion we know with some fulness. In the age of Hippocrates even the most sceptical enquirers harboured some belief in the supernatural origin of dreams; it is certain that dreams took a considerable part in the treatment of the sick, and that their value as means of 'suggestion,' and even of diagnosis, was recognised down to the time of Galen. 'Incubation,' or 'temple-sleep,' was practised in the Greek temples, as in the Egyptian, under the hands of the priests. In the fatal illness of Alexander his generals had recourse to it on his behalf. Incubation was by no means peculiar to the temples of Asclepius;

Treatment
at Temples.

it was practised at many other shrines, as of Apollo, Aphrodite and Hera ; and in later times. It is said, on slight evidence, that a course of rational medicine preceded the incubation. The suppliants in crowds—the sexes were not segregated—their imaginacious previously exalted by imposing rites, lay for sleep in the precincts by night. If, as we hear, some were sleepless, the priests took care no doubt that they should see visions and hear prophecies nevertheless. In such visions the tame snakes kept in the temples played some part ; this we infer from the *Plutus* of Aristophanes, from some of the inscriptions from Epidaurus, and from other testimony. Like the Delphic priestess, the priest of Asclepius also may have kept himself informed on the private concerns of the suppliants, at any rate of the more eminent of them ; and we ourselves are in no position to denounce this blend of superstition, of the supernatural, and of natural and worldly wisdom, as mere quackery. Indeed, the Apolline religion may be regarded as an Ionian revolt from nature cults, gloomy obscure and Corybantic, which then, as in other times and places, enslaved the thought and debased the passions of man. We may dwell rather on the therapeutical results obtained indirectly by rational means, and by the preparation for the vigils ; this seems to have consisted in baths, fasting, purgation, anointings and even bleeding : measures which had their vulgar advantages. On a larger scale, and more persistent method, these trainings, dietetics, gymnastics, mineral waters, sea-baths and the like, fell in with the work of the physicians, and with the Greek cult of the body. Fees were paid at the end of the course.

Besides gold and silver certain peculiar votive offerings were made in the Asclepieia, as still in many modern temples, which bore rude witness to the cures. Some were pictorial or glyptic representations of diseased parts ; or, especially in the case of internal maladies, written records. It has been alleged, though on a misapprehension, that the clinical knowledge of the physicians was founded on these records, and was thus handed down in the medical schools. In the Hippocratic collection the Coan Prenotions and the first book of Prorrhetic are said to have been compiled from such sources, and even some of the Aphorisms also ; though it is probable that parts of the earlier aphorisms came, with the aphorismic style, from Egypt. Votive tablets could have had no such value, unless dictated by the physician ; indeed there is some evidence that the practice of taking clinical notes originated with the physicians.

719. That Hippocrates—by which name we are wont to designate the most eminent of about eight Greek physicians who bore it—was of the Asclepiadae, certainly does not prove that he was of the stem of Asclepius, a kinship which he never claimed, nor even that he was of a priestly caste ; by the time of which we are speaking the Asclepiadae had probably become what, in our own day, we call a College or Guild. In early times Greek medicine seems to have been the inheritance of certain families not of sacerdotal tradition (*Iliad* iv.

Medical
guilds.

219), and the brotherhood of blood seems to have given place to the brotherhood of a corporation. In the *Iliad* we have seen that with the Greeks before Troy were many of the craft, that they were held in the highest esteem (xi. 506), and that some of them, at any rate, were illustrious, even kingly persons. The field anatomy of Homer is by no means contemptible; he directs no strokes at random, and the heroes knew when a stroke was mortal or not (iv. 185 and 190). Nor was medical practice all surgery. Medicinal herbs belong to our earliest tradition. In the *Odyssey* Eumæus speaks of an *ἰητήρ κακῶν* in a context which suggests that even then physicians travelled from place to place, offering welcome service; Nestor's wife Agamede 'knew all drugs' (*Il.* xi. 740). It is said that doctors were introduced into the Spartan army by Lycurgus, where they had a special camp. In the Hippocratic collection there are chapters on the surgery of war. Epameinondas had physicians with his forces at Mantinea; and Xenophon speaks, more than once, of doctors in attendance upon the army: there were eight at least with the Ten Thousand.

Of the constitution of the medical guilds we have some precious evidence in the Oath (known as 'of Hippocrates'); from it we infer that novices were initiated solemnly, and adjured to walk in the steps of masters who held up before their eyes noble examples of honour, integrity, obedience to the laws, secrecy, and loyalty to the interests of the patients under their care. We can scarcely doubt that this oath, which is probably older than the time of Hippocrates, owes its weight, austerity and dignity to an ancient and honourable tradition of medical independence and responsibility.

720. Physicians of the school of Croton seem to have been regarded as the leaders of the profession in Hellas, and, a hundred years before Hippocrates, one of them, the celebrated Hippocrates. Democedes, practised in Aegina, in Athens and in Samos. Hippocrates (born *c.* 460 B.C.) was of Cos—the Mecca of medicine. The Coan School was flourishing in the sixth century. In the name of Hippocrates stands a large body of treatises; some, such as the *De aere, locis, et aquis*, bear the stamp not only of a great and individual mind, but also of a mind positively scientific in bent and habit; others are class-books and collections, more or less rude, of notes and aphorisms, in many instances significant of a true growth of natural knowledge such as we attribute to Ionia; others again, if we may judge by their doctrines, are of Cnidian rather than of Coan origin. All the books seem to be earlier than Aristotle; and in many treatises an older body of doctrine is assumed, and even quoted. Of some sixty works under the master's name, perhaps not six come from his hand; indeed there is little better evidence to connect even these with the great Hippocrates than the internal evidence that they sprang from the mind of a certain individual genius, and the presumption that the doctrines of a teacher so venerated as Hippocrates would surely be preserved, either by his own hand or by his disciples. Yet, as in the 'Menonian' notes of

Aristotle certain highly speculative opinions on the *πνεῦμα* seem to be attributed to Hippocrates, the personal authenticity of particular works in the collection is still more obscured. Those opinions however are more characteristic of Diocles, who was known as the 'alter Hippocrates.' On the other hand, to speak of unauthentic works issued under the master's name as 'forgeries,' in the common sense of the word, is to ignore the history of the ancient and mediæval schools. Many of them were documents of the School, current under the name of the leader; others, not properly of the canon, nor indeed of the same school of thought, were gathered into the collection more or less accidentally. Their various origin is proved by many inconsistencies of anatomical and other detail, as well as of doctrines and style.

721. Of the practice of the Greek physicians we know little. Some of them were attached, as teachers, to the schools. We know that eminent physicians were elected as public physicians, and were 'called' to the cities, or were sent for by this tyrant or that, as Democedes by Polycrates, and detained about his person for large reward. It seems probable that Thales, who lived at the time of the Milesian factory in Egypt, studied in that country; and, as Hippocrates, like other philosophers, is known to have travelled widely, it may be assumed that he visited Egypt. Physicians on their travels were consulted on the way, and probably, after the manner of the Sophists, delivered lectures. We read indeed of 'peripatetic physicians'; and some historians have interpreted the peripatetic as the practising physician, as contrasted with the physician of the closet; but Greek medicine does not smell of the lamp. Here we may recall the Oriental custom of laying out the sick by the highways to solicit the advice of the passers by. Certain physicians were settled officially, for long periods or for life, in the cities; they were elected by the assembly, and received salaries, not, or not only, from the civic treasury but from a poll-tax. In Athens there were at least six public physicians. Democedes held an office of this kind in Aegina and afterwards in Athens. In ancient Greece anyone might practise privately, but for civic service guarantees were required. Thus apprenticeships and schools arose; and probably there was a register. Midwives and 'wise women' abounded (*v. Eur. Hipp.* 293), but no woman could be recognised as a physician. The salaried medical officers guarded the public health, combated epidemics, and may have given instruction in dietetics and training. Their presence was required at games and festivals. The public physicians were not forbidden to take fees from private persons, but they rarely did so; ordinarily they attended all persons gratuitously, including strangers visiting the city. The 'Oath of Hippocrates,' probably of more ancient date, seems to contemplate private practice almost exclusively. We may note that in it the title of Asclepiad does not occur. The public physicians were men of distinction and dignity; generally speaking, their remuneration seems to have been in corn to the value of 500—700 drachmas per annum, with

Private
and Public
practice.

house and orchard, liberal civic immunities, and many honours. The Greek physicians of this period gave freely to the poor and to the stranger not only of their skill but also of their substance.

722. The physicians kept offices or shops supplied with a large variety of surgical and other instruments, dressings for wounds, and drugs, of which last there was a customary Treatment. but not an official list. In these offices, and also by druggists (*φαρμακοπῶλοι*), medicines were dispensed by the single dose or in larger quantities. Moreover to these medical homes, which grew into hospitals, patients were often removed for closer observation, or for special treatment. There was a public *Ἱατρεῖον* also in every large city, kept up out of the taxes or rates. Slaves were employed as assistants and dispensers. The physicians had also cases fitted with medical and surgical appliances which they carried with them on their travels. Lofty in ethical standard and pure of all charlatanry as was the school of Hippocrates, too often, in later centuries at any rate, medical practice degraded into a trade; and these offices, like barbers' shops in later times, became places of call, not always to the honour of the profession. Indeed we are told that in ancient Greece, as in mediaeval Europe, elegant and well-dressed physicians were wont to rely rather on personal attractions than on scientific acquirements; and that others descended even to the level of quacksalvers and criers of medical wares in the markets. In Egypt specialism in medicine had been carried to the absurdest extremes. To the Greeks our unscientific dichotomy of medicine and surgery was unknown, probably inconceivable; but we learn from the Oath of Hippocrates that cutters for stone were specialists; so also were oculists and dentists (gold-stopping of teeth is a very ancient practice). The graver operations were in early times a perilous undertaking; and probably, in ancient Greece, as certainly in many later centuries, local practitioners were wont to entrust them to peripatetic craftsmen, who took care to disappear before the issue of their work could be known.

We have seen then that medicine, as a natural science and rational practice, always enjoyed in Greece a peculiar independence of the hierophant and the philosopher. The school of Hippocrates was a school of watchful observation of nature, though not of experimental verification; a school devoted to description of diseases—chiefly of the acuter kinds, and of these chiefly the fevers—as orderly sequences of symptoms classifiable under certain types; and also to the study of constitutional proclivities, but not of accurate details or subtler distinctions which at the time was scarcely possible. It was a school of careful observation of external but not of inward causes, nor of the local seats of disease; for of course pathology was rudimentary. In therapeutics it was a school of vigilant waiting upon nature, and of the use of physical means such as diet, waters, fresh air, and gymnastics; not of violent interference by bleedings, by drugs, or by empirical specifics. Its honourable motto was *ἰατρὸς ὑπηρέτης*

τῆς φύσεως. Surgery, by this direct and natural study of facts, attained a degree of positive excellence which even to this day is admirable.

723. After the Hippocratic period, under the Macedonian supremacy, medicine, though high in court favour, languished, like other intellectual pursuits, to rise again with the marvellous Greek fecundity in Alexandria, under the Ptolemies; especially under Ptolemy Soter. To Egypt however it owed nothing; the impetus of Aristotle was continued in the great progress of anatomy. The two chief figures among the Alexandrian physicians are Herophilus and Erasistratus, under whom not only descriptive anatomy advanced but also the conception of local seats of disease. Herophilus was a pupil of Praxagoras of Cos, who seems first to have taught the clinical use of the pulse. For physiology however little was done till it sprang into life from the brain of Galen. The great epoch of Alexandria was not long; medicine began to lose the broad and sane example of Hippocrates and broke up into sects, dependent in part upon scholastic philosophies; and in practice polypharmacy and the lower forms of empiricism increased. Many of the chief schools of medicine were at this time in Asia Minor; as in Pergamum, Ephesus, Tralles, Miletus. In the second century A.D. Greek medicine prevailed in Rome, after it had been long defied by Cato and his followers. Asclepiades, a Bithynian, the friend of Cicero and Crassus, was the first eminent Greek physician in Rome. By Tiberius the office of Court Physician was established, and we must not refrain from mentioning here the great Latin name of Celsus. In Galen (*ob.* 210) Greek medicine found its culmination and its eclipse. This extraordinary man, the founder of physiology by the true way of the experimental method, a prodigy of learning, and only too copious and ingenious a philosopher, stood eminent on the abyss which in after time swallowed up medicine and all natural science for more than a thousand years, until the medicine of the West was born again in the schools of Italy, and renewed its youth under the spell of Vesalius and Harvey.

H. Haeser, *Geschichte der Medicin*, 3rd ed. 1875; C. Daremberg, *La Médecine dans l'Homère*, Paris, 1865; Idem, *État de la Médecine entre Homère et Hippocrate*, Paris, 1869; Littré, *Cœuvres d'Hippocrate*, Paris, 1839-61, 10 vols.; Francis Adams, *The genuine works of Hippocrates* (in English), London, Syd. Soc. 1849; Ilberg, *Hippocratische Corpus*, Görlitz, 1889 (and other essays); *Anonymi Londinensis ex Aristotelis Iatricis Menoniis etc. Eclogae*, ed. by H. Diels, Berlin, 1893; F. G. Kenyon, *Classical Review*, Vol. VI.; Pétrequin, *Chirurgie d'Hippocrate*, Paris, 1877; Wellmann, *Fragmentsammlung d. griechischen Aerate*, Berlin, 1901; Idem, *Die pneumatische Schule bis auf Archigenes*, Berlin, 1895; A. Corlieu, 'Étude médicale sur la retraite des Dix Mille' in *Les Médecins Grecs depuis la mort de Galien*, Paris, 1885; Pohl, *De Graecorum Medicis Publicis*, Berlin, 1905.

VIII. CRITICISM AND INTERPRETATION.

VIII. I. DIALECTS.

724. THE word *dialect* is applied in two senses which require to be kept distinct. The first of these is its use to indicate the particular form of a language spoken by the inhabitants of a given place at a given time; the second is its use in the phrase *literary dialect*, by which is meant the particular form of language in which some particular work or works of literature are presented to us. A literary dialect often does not correspond exactly to the dialect of any particular place, but contains many forms and constructions drawn from various sources, especially earlier literary works, some of which may have been composed in dialects similar but not identical.

Spoken and
literary dia-
lects.

The ancient Greek world showed all the conditions likely to produce great diversity of dialects among its people. The tradition of different families, of separate descent from Aeolus, Dorus, and Ion, was widespread; the multitude of independent States, mother-cities and colonies, kept separate by the sea and by difficult mountains, with their rivalries tending to become stronger than their friendships, was sure to develop dialectic differences. These differences are shown to some extent by the extant literature, but more fully by the large number of ancient inscriptions. Many States had no literature of their own; and there was a tendency for literature in certain styles to create a mixed artificial dialect, not spoken in any part of Greece, but widely intelligible to educated persons.

Diversity of
dialects in
Greece.

725. The language of the pre-Hellenic population of Greece is known only from proper names, chiefly names of places, which cannot be analysed into known Greek elements. Herodotus, also, says (I. 57) that in his time some Pelasgians still spoke a non-Greek tongue in certain settlements in Chalcidice and on the Hellespont. Both of these arguments, however, must be used with caution. As yet archæology alone has revealed to us the Greece of times earlier than Homer. The numerous records of earlier ages which have recently been discovered in Crete are not yet deciphered; and from the fact that, in the Greek of historical times, we cannot find etymologies for all the names of persons and places, which have been handed down from an earlier age, we cannot draw the certain conclusion that these names are therefore of an origin which is not Greek. Moreover, Herodotus himself could not distinguish clearly between the Pelasgians and the later population of Greece, for elsewhere (VII. 94) he tells us that the Pelasgians

Language of
the pre-Hel-
lenic people.

of Achaia in the Peloponnese changed their name to Ionians. This name they took from Ion, the son of Xuthus, after Danaus and Xuthus had come to the Peloponnese. The islanders also, who were afterwards called Ionians, and the Aeolians were, he says, once called Pelasgians. If the name of the Pelasgians means, as some think, the People of the Plain, or, as is more probable, the Sea-folk, from the weak stem of *πέλαγος* and the ethnic suffix *-κοί* (*Πελαγσ-κοί becoming Πελασγοί as *μίγ-σκω becomes *μίσγω*), it is not necessary to assume that all the communities called Pelasgian were of the same racial origin, and both statements of Herodotus may be correct.

726. In considering dialects, the points to be taken into account are sounds, grammatical inflexions, syntax and vocabulary. Of most importance are the sounds used by each dialect; the other features generally confirm the results attained by a consideration of the sounds alone. Here we are of course not bound to assume that the same symbol indicates the same sound in different dialects; no doubt the symbols were differently pronounced in different parts of Greece and even in the same part at different times. The chief points in regard to sounds are: (a) in vowels, the retention of *ā* or its change to *η*; the results of contraction, especially of *εε* and *οο*; the methods of 'compensation,' e.g. in the syllable which was originally *ovs*; (b) in consonants, the treatment of the original spirants *γ*, *σ*, *ω*, especially the last, and the extent to which original guttural sounds were retained or changed to corresponding palatal, dental, or labial sounds; (c) the accent. In inflexions, we find dialectic differences in the use of dual forms, in the relations of *-μι* to *-ω* verbs, and in several case-forms where the differences are sometimes really due to rules relating to sounds. In syntax we find dialects differing from each other, e.g. in the cases employed after *εἰς* and *ἐν*, and especially in regard to the elaborate rules for the use of moods with and without the particle *ἄν*, which seem to have been mainly the work of Ionic and Attic. In vocabulary striking differences sometimes occur, e.g. *λάω* 'wish' was one of the commonest words in Doric, but it was unknown to Ionic and Attic. No dialect was stable; all suffered changes, and these changes nearly always tended in the direction of that *κοινή* *διάλεκτος* which ultimately became the language of the Greek world.

727. The old classification of the Greek dialects into Aeolic, Doric, Ionic, and Attic is in the main sound, though 'Aeolic' is used rather vaguely if it includes every dialect not covered by the other three names. But the different dialects are not in all respects sharply contrasted one with another. Some peculiarities are common to Doric and Ionic, others to Attic and Boeotian and so on. Thus in Euboean (Eretrian), Boeotian, and Attic, certain classes of words show *-ττ-* where other dialects have *-σσ-*; Attic and Boeotian *πράττω*, Eretrian *πρήττω*. Yet Eretrian is Ionic not Attic, as *η* shows, and Boeotian is a mixed dialect intermediate between Aeolic and Doric. Again, medial *τ* before a following *ι* passes into *σ* in Lesbian,

Dialectic differences.

Classification of dialects.

Cyprian, Arcadian, Ionic, and Attic. Thus in Arcadian and Cyprian the preposition *πρὶ* appears as *πρός*; the form *πρῶτί*, its equivalent in meaning, similarly passes into *πρός* in Lesbian, Ionic, and Attic. Sound changes no doubt passed sometimes from one dialect to its neighbours. Thus the change of final *ς* to *ρ*, which characterises Elean, appeared later in Laconian (the similar change in Euboea was independent of this); the change of a medial *σ* between vowels into *ζ* and its consequent loss is found only in the later Elean, to which it must have come from Laconian and Argive. The particle *ἄν* is characteristic of Ionic and Attic, *κα* has approximately the same value in the Doric dialects; in Thessalian, Lesbian and Cyprian *κε* or *κεν* appears. Both *ἄν* and *κεν* are found in the literary dialect of Homer; in Arcadian the same value is attached to *καν*, possibly a confusion between the earlier *κεν* and the Doric *κα* rather than a combination of *κε* with *ἄν*.

Many authorities divide the Greek dialects into two groups: (1) the Ionic, including only Ionic and Attic; (2) the non-Ionic, including all other dialects. Against this classification it may be urged that both historically and morphologically Aeolic may claim closer connexion with Ionic than with Doric, so that a classification into Doric and non-Doric would be at least equally plausible. The earliest inscription found in Attica dates probably from the eighth century B.C., others on vases belong to the seventh century: the earliest Dorian known is from the rock inscriptions of Melos and Thera, which go back at least to the seventh century B.C. Ionic as early as the first part of the sixth century B.C. has been recently found in Paros and other islands. Aeolic of Lesbos, however, though represented in the early literature by Sappho and Alcaeus, has no representative of an early period amongst inscriptions, and inscriptions form a much better record of a dialect than literary works which have been copied again and again and the manuscripts of which are separated by many centuries from the date of the authors.

728. Closely akin, however, to the dialect of the Aeolic inscriptions are two dialects in which no literature is preserved but which, having been long isolated by geographical position and historical causes, have preserved a form of the Greek language that, in many of its features, is undoubtedly very archaic. These dialects are Arcadian and Cyprian. Arcadian was recognised in ancient times as the last remains of the ancient Aeolic spoken in the Peloponnese in pre-Dorian times and, according to tradition, Paphos in Cyprus was founded by Agapenor, an Arcadian, and his followers who, on their return voyage from Troy, were carried to Cyprus by stress of weather. Strabo points to the name of the promontory *Ἀχαιῶν ἄκτις* as conclusive proof of the truth of the tradition. All connexion between Arcadia and Cyprus had long been broken before authentic history begins, and therefore characteristics which the dialects possess in common may be regarded as dating from the age when Cyprus was colonised. The vocabulary of Cyprian is of an archaic cast often resembling that of the Homeric

Arcadian
and Cyprian.

poems. The exact forms of Cyprian are sometimes uncertain, because as late as the fourth century B.C. it continued to be written, not in the Greek alphabet, but in a syllabary of about 55 characters which (1) could not indicate a separate consonant like *ϕ* though it had symbols for *ρα, ρε, ρι, ρο, ρυ*, (2) did not distinguish between breathed, voiced, and aspirated consonants, so that *π, β, φ* are all represented by the same symbol, (3) did not mark the presence of a nasal before another consonant, so that it is not certain whether the acc. pl. of *-o-* stems ended in *-ovs* or *-os*, and forms like *τάνδε* are written in the syllabary *ta-te*, (4) made no distinction between long and short vowels. Arcadian and Cyprian agree in changing final *-o* to *-u* as *ἀπύ, γένοιτυ*, etc., both have the gen. sing. of masculine *ā* stems in *-av* for *-ao* (extended later in Arcadian of Tegea to feminine stems), both have locatives used for datives in *o* and *ā* stems (this is much more developed in Arcadian than in Cyprian), both have the third person plural in *-vσι*; *ἐν* appears as *ιν*, and *ἀπύ* and *ἐς* (for *ἐξ*) govern the locative or dative not the genitive. Arcadian has *δ* or *ζ* for the original guttural sound which in Attic is *β*; *δήλομαι*, Attic *βούλομαι*; *ζέλλω*, Attic *βάλλω*. It changes the verb-ending *-ται* into *-τοι*.

Examples.

(1) Arcadian, from a Tegean building contract probably of third century B.C.: *εἰ δὲ ἄν τις τῶν ἐργωνᾶν¹ ἢ τῶν ἐργαζομένων ἐπηρεάζεν² δέατοι³ ἢ τὰ ἔργα ἢ ἀπειθῆναι τοῖς ἐπιμελομένοις ἢ κατυφρονῆναι τῶν ἐπιζαμιών⁴ τῶν τεταγμένων, κύριοι ἐόντω οἱ ἐσδοτῆρες τὸμ μὲν ἐργάταν ἐσδέλλοντες ἐς τοὶ ἔργοι⁵, τὸν δὲ ἐργῶναν ζαμιόντες ἢ ἐπικρίσιγ κατὰπερ⁶ τὸς ἐπισυνισταμένους ταῖς ἐσδοκαῖς⁷ γέγραπτοι.*

¹ =contractor. ² infinitive. ³ =δοκῆ. ⁴ =ζημιῶν. ⁵ ὄντων οἱ ἐκδοτῆρες τὸν μ. ἐ. ἐκβάλλοντες ἐκ τοῦ ἔργου. ⁶ =κατ τάπερ. ⁷ =τοὺς ἐναντιουμένους ταῖς ἐκδοχαῖς.

(2) From the Arcadian Orchomenus (locally Erchomenos). A treaty of union, in the fourth or third century B.C.

ᾧμοσαν Ἐρχομίνοι τάδε· ἀψευδῶν ἄν¹ τὰν συφοικίαν τοῖς Εὐαιμνίοις πὸς τὰς σύνθεσις, νεὶ τὸν Δία τὸν Ἄρηα, νεὶ τὰν Ἀθάναν τὰν Ἀρήαν, νεὶ τὸν Ἰνυάλιον τὸν Ἄρηα· οὐδ' ἄν ἐξελαύνοια τὸς Εὐαιμνίους οὐποτε, οὐ τὸν Δία τὸν Ἄρηα, κτλ.

¹ 'I will be true': *ἀψευδῶν* possibly a subj. followed by an opt. *ἐξελαύνοια*, as in Homer. Others take both as opt. *ἐξελαύνοια* is more archaic than the ordinary *ἐξελαύνοιμι*. Though this is the first occurrence of the form, the formation had been long postulated by comparative philologists.

(3) From a Tegean decree of proxeny: *ἦναι δὲ αὐτοῖ ἴνπασιν γαῦ, οἰκίαν¹, ἀσυλίαν, ἀσφάλειαν καὶ ἢν πολέμοι καὶ ἢν ἱράναι.*

¹ =ἐγκτησιν γῆς, οἰκίας.

(4) Transliterated from a bronze plate at Idalion in the Cyprian syllabary. Date probably about the middle of the fifth century B.C. *ᾧπι σις κε τὰς φρήτας¹ τάσδε λύση, ἀνοσίγα φοι γένοιτυ· τὰς κε ζᾶς² τάσδε κὰς τὸς κάπος τόσδε οἱ Ὀνασικύπρων παῖδες ἔξονσι³ αἰφεῖ.*

¹ =ἐάν τις ῥήτρας. ² =γᾶς (χωρία). ³ fut. with *κε* as often in Homer.

(5) Transliterated from an inscription in the Cyprian syllabary (there is also a Phoenician text) at Idalion. Date about 380 B.C.

ἰν τῷ τετάρτῳ φέτει βασιλιῆφος Μιλκιγάθωνος τὸν ἀνδριγάνταν¹ τόνδε κατέστασε ὁ φαίαξ Βαάλαραμ ὁ Ἀβιδμύλκων τῷ Ἀπόλλωνι τῷ Ἀμύκλω, ἀπ' ᾧ φοι τᾶς εὐχολᾶς ἐπέτυχε² ἰν τύχα ἀζαθᾶ.

¹ = ἀνδριαντα.

² From whom he obtained the fulfilment of his prayer.

729. True Aeolic was the dialect of Lesbos; the dialects of Boeotia and Thessaly (except the southern part, which early became Dorian) were akin to it. The common characters are a Aeolic. tendency to *v* for *o* (*ou* for *ω* in Thessalian, *v* for *οι* in Boeotian), the use of adjectives for patronymics, and a tendency to labialise dentals in certain words which originally had a guttural sound: *πέτταρες* for *τέτταρες*, *Βέλφαιος*, adj. to the Thessalian form for *Δελφοί*, *φήρ* for *θήρ*. These dialects also affect, like Homer, dat. pl. in *-εσσι*, and decline the perfect participle like a present (cp. the Homeric *κεκλήγοντες*).

Lesbian and Thessalian agree further in using double liquids or nasals where assimilation has taken place, while other dialects lengthen in some form the preceding vowel: *χέρρες* (*χείρες*), *βόλλα* (*βουλή*), *ξέννος* (originally *ξένφος*). Both also tend to inflect contracted *-ω* verbs with *-μι* forms, *ῥρημι*, etc. and their prepositions show apocope. Lesbian is characterised by *ψίλωσις*, a loss of the rough breathing which is shared by Asiatic Ionic, and by *βαρυτόνησις*, a uniform throwing back of the accent except in prepositions. Lesbian also has *-αις* for earlier *-ανς*, or *-αντς*, as *ἀκούσαις* ptcp., *παῖσα* (*πᾶσα*), *δίκαις* acc. pl., and so *μοῖσα*, *λιποῖσα*, *στρατάγοις* acc. pl., *ἔχοισι* 3rd pl.

Example.

Lesbian, from an inscription of the fourth century B.C., at Mytilene: τὸν κέρναντα¹ τὸ χρύσιον ὑπόδικον ἔμμεναι ἀμφοτέραισι ταῖς πολιέσσι, δικάσταις δὲ ἔμμεναι ταῖς ἄρχαις² παῖσαις ταῖς ἐμ Μυτιλήνᾳ. αἱ δὲ κε καταγρήθη τὸ χρύσιον κέρναν ὑδαρέστερον θέλων, θανάτῳ ζαμιώσθω. αἱ δὲ κε ἀπυφύγη μὴ θέλων ἀμβρότην³, τιμάτω τὸ δικαστήριον ὅτι χρὴ αὐτον πάθην ἢ καθήμεναι.

¹ = κίρναντα.

² δικάσταις, ἄρχαις, acc.

³ = ἀμαρτεῖν.

The remains of Sappho and Alcaeus are usually given in the mss. with the non-Aeolic accentuation, and other specially Aeolic features have to be restored by the editors, on the general testimony of ancient grammarians. The dialect of these poets became the type for the form of lyric poetry represented by them and influenced the Ionian Anacreon and also the choral poetry of the Dorians. The following passage of Sappho with the text corrected as in Smyth's *Greek Melic Poets*, p. 27, may serve as an example of the early Lesbian poetry. Many more fragments of these poets have been published in recent years; see especially vol. x. of the *Oxyrhynchus Papyri* (1914), pp. 20 ff., from papyri of the second century A.D.

Sappho to Alcaeus :

αἰ δ' ἦχες ἔσλων ἡμερον ἦ κάλων,
καὶ μὴ τι φείπην γλωσσ' ἐκύκα κάκων,
αἰδώς κέ σ' οὐ κ[ατ]ῆχεν ὄππατ'
ἀλλ' ἔλεγες περὶ τῷ δικαίω.

Thessalian agrees with Boeotian in changing -ντο of 3rd plural into -νθο and η into ει. Thessalian has also ει for αι in verbal endings, and -οι and occasionally even in prose -οιο for the ending of the genitive in -ο stems.

Examples.

(1) Thessalian, a lead tablet found at Dodona, from the town of Mondaia in the north of Perrhaebia :

Δὶ Νάω καὶ Διώνῃ ἐπικουνᾶται Μονδαιατᾶν τὸ κουνὸν περ τοῖ ἀργύρροι τᾶς Θέμιστος.

(2) From a reply of Larissa to Philip V of Macedon, 214 B.C. ; Philip's letter in the ordinary Greek of the period, which is the occasion of the document, is quoted and repeated in *Oratio obliqua* in Thessalian. In its use of imperfects in indirect discourse Thessalian is more like Homer than Attic.

Πετραῖος καὶ Ἀνάγκιππος καὶ Ἀριστόνοος,
ὡς ἀπὸ τῆς πρεισβείας ἐγένοντο, ἐνεφάνιζόν
μοι, ὅτι καὶ ἡ ὑμετέρα πόλις διὰ τοὺς
πολέμους προσδεῖται πλεόνων οικητῶν. ἕως
ἂν οὖν καὶ ἐτέρουσ ἐπινοήσωμεν ἀξίους
τοῦ παρ' ὑμῖν πολιτεύματος, ἐπὶ τοῦ παρόν-
τος κρίνω ψηφίσασθαι ὑμᾶς ὅπως τοῖς
κατοικοῦσιν παρ' ὑμῖν Θεσσαλῶν ἢ τῶν
ἄλλων Ἑλλήνων δοθῆ <ἦ> πολιτεία.

Πετραῖος καὶ Ἀνάγκιππος καὶ Ἀριστόνοος,
οὓς ἀπ τᾶς πρεισβείας ἐγένονθο, ἐνεφανίσουεν
αὐτοῦ, πόκκι καὶ ἂ ἀμμέον πόλις διέ τὸς
πολέμους ποτεδέετο πλειόνουν τοῦν κατοικεισύν-
τουν· μέσο ποδι κε οὖν καὶ ἐτέρουσ ἐπινοείσουμεν
ἀξίους τοῖ παρ ἄμμῃ πολιτεύματος, ἐτ τοῖ παρῆν-
τουσ κρηνέμεν ψαφισάσθειν ἄμμῃ, οὓς κε τοῖς
κατοικέντεσι παρ ἄμμῃ Πιεθαλοῦν καὶ τοῦν
ἄλλουν Ἑλλάνουν δοθεῖ ἂ πολιτεία.

Boeotian shows, like the Boeotian people, a certain leaning towards the Dorian. Its marks are ου for υ (merely because υ in Boeotian remained οο as in *moon* and did not become *υ* as in Attic), ει for η, αε (at Tanagra) or η or ει for αι, οε or υ for οι, ι for ει, ττ for σσ, δ initially, δδ medially for ζ.

Examples.

(1) On a Cantharus. Apparently of the fifth century B.C.

Μογεία δίδωτι τᾶι γυναι|κὶ δόρον Εὐχάρι | τεϋτρετιφαντῷ κό|τυλον ὄς χ'
ἄδαν πιε.

Though not so written, the inscription, apart from the first word, falls into two iambic trimeters.

(2) From a decree of the Boeotian League (about the end of the third century B.C.) found in the precinct of Amphiaraios at Oropus.

Χαροπίνω ἄρχοντος, μεινὸς Πανάμω, ἐπεψύφιδ(δ)ε Διδύμων Ἐπαρμόστω Ὀποέντιος. Δαμόκριτος Τιμογένιος Ὠρώπιος ἔλεξε· Δεδόχθη τῷ δάμν· πρόξενον εἶμεν κῆ εὐεργέταν τῷ κνωῶ Βοιωτῶν Κλεόφαντον Κλεοφῶντος Χαλκιδεῖα κῆ

αὐτὸν κῆ ἐγγώνως, κῆ εἶμεν αὐτοῖ κῆ γᾶς κῆ ὑκίας ἔππασιν¹ κῆ φισοτέλιαν κῆ ἀσφάλιαν κῆ ἀσουλίαν κῆ πολέμω κῆ ἱράνας ἰώσας² κῆ κατὰ γᾶν κῆ κατὰ θάλατταν, κῆ τὰ ἄλλα πάντα καθάπερ κῆ τῦς ἄλλυς προξένυς κῆ εὐεργέτης.

¹ = Attic γῆς καὶ οἰκίας ἐγκτησιν.

² = οὔσης.

(3) From Thespieae. Date towards the end of the third century B.C.

τοῖς μὲν πεπιτευόντεσσι¹ κῆ πεποιοντέισσι τὰ ἐκ τᾶς προρρείσιος ἧ κα βείλωντη² τᾶς αὐτᾶς μισθώσιος ἐσσεῖμεν αὐτῦς ὑπογράψασθη παριόντεσσι αὐτοῖς· ὁπόττα δέ κα ἀπίτευτα ἰωνθι¹ ἐνβᾶση³ τὰν ἀρχὰν καθ' ἃ κα φάνειτη αὐτῦς σύνφορον εἶμεν.

¹ πεπιτευόντεσσι Meister explains as 'irrigating' (πιτεύω connected with πίνω, πισίω); ἀπίτευτα ἰωνθι 'are not irrigated.' ² = Attic βούλωνται. ³ Transitive.

730. Ionic and Attic agree in opposition to the other forms of Greek speech in having *η* for *ᾶ*, *ει* and *ου* for *εε* and *οο* and also for *ε* and *ο* in compensatory lengthening, *σι* for *τι*; *ϕ* is not in Ionic. ordinary use; *ᾶο* tends to become *ηο* in Ionic, *εω* in Attic; in neither is the particle *κε* or *κα* found. Ionic as distinguished from Attic has *ρη*, *ιη*, contracts *εο* into *ευ* (as later do many other dialects) and *οη* into *ω*, and tends to lose the aspirate, which seems to have been entirely dropped in the Ionic of the Asiatic coasts and adjacent islands. Ionic has no dual. Other points of difference are exemplified by the Ionic *δέκνυμι*, *νῆϑς*, *γίνομαι*, *ξείνος*, *μῶνος*, *ὦν* for *οὔν*, *σήμερον*, *πρήσσω*.

Slight differences are found between the dialects of Asiatic Ionic, the Cyclades, and Euboea with its colonies; *αο* for *αν* and *εο* for *ευ* characterise the Ionic of the Asiatic cities and their colonies; Euboea retains *ϑ* and the rough breathing which survives also in the Cyclades. In Asiatic Ionic *ι*-stems have the gen. in *-ιος*, elsewhere their gen. is in *-ιδος*. In Asiatic Ionic Herodotus (I. 142) distinguishes four varieties, which were at least in part occasioned by mixture with Carians and other peoples who preceded the Greeks in Ionic lands.

Examples.

(1) Asiatic Ionic, from a late copy of an inscription of a guild of singers at Miletus. The original must have been older than 494 B.C. as Didyma was destroyed in that year. It may have been for the greater part nearly a century older, though the passages (*a*) and (*b*) were of different dates:

(*a*) ὅταν στεφανηφόροι ἴωσιν ἐς Δίδυμα ἧ πόλις διδοῖ ἑκατόνβην τρία ἱερῆμα τέλεια· ἐβδομαίοισιν δὲ δύο τέλεια καὶ χῶν τὸμ παλαιὸν ὀρθῆς ἐκάστης.

(*b*) κῆρυκι ἀτελείῃ ἐμ μολπῶ πάντων καὶ λάξις σπλάγχμων ἀπὸ θυῶν ἐκαστέων καὶ οἶνο φορηῇ ἐς τὰ ψυκτήρια τέλεσι τοῖσ' ἑωυτῶ. (The herald is to be free from all dues in the guildhouse, to have a share in the meat of all sacrifices, and the right to have his wine (which came from the guild cellar) taken at his own expense to the cool places where the guild feasted.)

(2) From an Erythraean decree of proxeny (about 355 B.C.).

ἔδοξεν τῇ βουλῇ καὶ τῷ δήμῳ· Μαύσωλλον Ἐκατόμω Μυλασέα εἶναι ἐοεργέτην τῆς πόλεως καὶ πρόξενον...καὶ ἀτέλειαν καὶ προεδρίην· ταῦτα δὲ εἶναι ἀδῶ καὶ ἐκγόνοις.

The Eretrian dialect had the peculiarity of changing σ into ρ . This change was most common in the middle of words between vowels, but occurred according to Plato also at the end of words. The only instance in an inscription however is $\sigma\pi\omega\rho \acute{\alpha}\nu$, where the second word is closely connected with the first.

Example. From a decree of proxeny (about 411 B.C.).

$\epsilon\delta\omicron\zeta\epsilon\nu \tau\epsilon\acute{\iota} \beta\omicron\upsilon\lambda\eta\eta \text{ } \text{'}\text{Ηγέλοχον τὸν Ταραντῖνον πρόξενον εἶναι καὶ εὐεργέτην καὶ αὐτὸν καὶ παῖδας καὶ σίτηριν εἶναι καὶ αὐτῷ καὶ παιρὶν ὅταν ἐπιδημέωριν καὶ ἀτελέην καὶ προεδρίην ἐς τοὺς ἀγῶνας ὡς συνελυθερώραντι τῆμ πόλιν ἀπ' Ἀθηνάων.$

Ionic was the chief literary dialect from the seventh to the middle of the fifth century B.C. The Elegiac and Iambic poets used the language of their native cities with some Epic forms intermingled especially in Elegiac. The language of Herodotus was called *μεμυγμένη* or *ποικίλη* by the ancient grammarians who name him also *Ὀμηρικώτατος*, as being influenced to a greater extent than earlier writers like Hecataeus by the epic style and diction. Probably a large number of the uncontracted forms like *ποιέει* in Herodotus are due to later copyists. He has, however, forms like *ἔωντοῦ* which are not found in inscriptions (the only certain example is given above in the inscription from Miletus) nor in earlier Ionic writers. It is remarkable that the forms *κῶς*, *κότερος*, etc., which are regular in Herodotus and found also in Iambic poets do not occur in inscriptions, the only exception being the form *ὀκοῖα* recently discovered in an inscription of the fourth century B.C. It seems that the literary dialect represented in the inscriptions did not correspond closely to the spoken language—it manifests none of the distinctions between the different varieties of Asiatic Ionic which Herodotus notices—and that Herodotus adopted forms like *κῶς*, etc., from the spoken dialect. In Timotheus' *Persae* (about 400 B.C.) an Oriental from Celaenae, who speaks Greek very imperfectly, uses *κῶς* while attempting to express himself in Ionic (*Ἰάονα γλώσσαν ἐξίχνηύων*). Being regarded as vulgar, these forms are not found in the medical writings attributed to Hippocrates, who, though his school was in the Doric island of Cos, employed Ionic in his writings as being the literary dialect of his day, and was followed in this by later medical writers. The mimes of Herodas are probably artificial in their dialect—they too belong to Cos but date from the Alexandrian period—; artificial also are the *De deo Syriae* of Lucian, and the *Indica* of Arrian.

731. The earliest inscription found in Attica is upon a wine goblet

(*οἶνοχόη*) given as a prize, which dates probably from the eighth

Attic.

century B.C. (see Fig. 179). It consists of an hexameter and three additional words, the form of the last two being doubtful. As commonly in very old inscriptions, the writing runs from right to left.

NOTNAΠ NOTΣEXPO NYN SOΘ

NIM NAKED OTOT IEZIAΠ ATATOLATA

(ὄς νῦν ὀρχηστῶν πάντων ἀταλώτατα παίζει | τοῦτο δεκάη μιν.)

As Attica took no prominent part in Greek history till the latter part of the sixth century its dialect probably had undergone little change for a long period. With the development of commerce came a great influx of strange words, so that the author of the earliest work in the Attic dialect—the treatise on the *Constitution of Athens*, formerly attributed to Xenophon, but dating from about 425 B.C.—remarks that while every other Greek land preserves its own dialect, the language of Attica is full of words drawn from all quarters. From the speech of Lysias against Theomnestos we learn that the vocabulary of Attic had changed very much since Solon's time. The old forms in *-οισι* and *-ασι, -ησι, -ησι*, for the dative plural died out in the course of the fifth century B.C., though some forms in *-ασι* and *-ησι* like *θύρασι, Ἀθήνησι* survived as adverbs.

Within Attic itself there were differences, the city dialect differing from the rustic and the cultivated language from both. In Aristophanes' *Clouds* 872 Socrates remarks on Pheidippides' pronunciation of *κρέμαιο*. The vase inscriptions show us the vulgar dialect, which differs in many respects from the dialect which appears in the literature.

It is probable that Attic was the most difficult of the Greek dialects owing to the number of particles and the subtlety of their use. We learn from Cicero that the true Attic accent was difficult to acquire, Theophrastus the philosopher being detected by a market-woman as a foreigner after he had resided many years in Athens, though he belonged to the neighbouring Euboea. From the speech against Eubulides which is attributed to Demosthenes, we learn that this accent was also very easy to lose. Thourcritus, who had been taken a prisoner in the Decelean war, and sent to Epeirus as a slave, on his return to Athens many years afterwards was unable to recover the Athenian pronunciation; hence later his son was in danger of losing the franchise as being the son of an alien. Solon had long before referred in his poems to the same fact:

ἀνήγαγον παρθέντας... γλώσσαν οὐκέτ' Ἀττικὴν | ἰέντας.

The works of the earlier Athenian writers are not in the spoken but in a literary dialect. The verses of Solon were influenced by the existing lyric poetry of Greece. In his elegiacs some epic forms are found; in his iambics a considerable number of Ionisms: *δουλήνη, τρομευμένους, ποιευμένους, αἰδεύμαι, δοκέω* (but contracted in pronunciation). In tragedy the choral odes imitated the Doric lyric poetry but only so far in form as to change *η* to *α*, though in vocabulary and metrical structure much was drawn from this source. In the iambic portions some forms are certainly Doric. As Aristotle tells us (*Poetics* 3) it was urged amongst other arguments in support of their claim to be the originators of both Tragedy and Comedy that they used *δρᾶν* when the Athenians used *πράττειν*. It is noticeable that none of the Ionisms found in Solon's iambics occur in Tragedy, and if Tragedy had its beginnings amongst Dorians, the persistence with which particular dialects were assigned to particular forms of literature would easily account for the presence of occasional Dorisms.

One feature common to Tragedy and to Thucydides is the use of *-σσ-* for *-ττ-*, the latter characterising the Attic dialect of all ages. That this was a literary mannerism is shown by the fact that none of the orators save Antiphon uses *-σσ-*. In only one speech (*περὶ τοῦ χορευτοῦ*) does Antiphon use *-ττ-*. The Thucydidean *πράσσω*, *έλασσον*, forms in *-αται*, *ξύν*, etc., were not in use in the Attic of the period, and a considerable element in Thucydides' vocabulary was also strange to the ordinary spoken tongue. The so-called 'old Attic,' therefore, does not agree with the Attic inscriptions, but arises under the literary influence of Ionic.

It was not till 403 B.C. that the Athenians officially adopted the Ionic alphabet and with it the spelling of Greek words which is now customary. In the older alphabet *ε* was used for *η* and for *ει* arising from contraction or compensatory lengthening as well as for *ε*, *ο* was used for *ω* and *ου* arising like *ει* above, as well as for *ο*, while *ξ* and *ψ* were represented by *χσ* and *φσ* respectively, and the rough breathing by *Η*.

Examples.

(1) From a decree of the beginning of the fifth century B.C. regarding the mysteries at Eleusis:

σπονδὰς εἶναι τοῖσι μύστέσιν καὶ τοῖς ἐπόπτῆσιν καὶ τοῖς ἀκολούθοισιν καὶ χρήμασιν τῶν ὀθνεῖῶν καὶ Ἀθηναίοισιν ἅπασιν... τὰς δὲ σπονδὰς εἶναι ἐν τῆσιν πόλεσιν οἱ ἂν χρῶνται τῷ ἱερῷ, καὶ Ἀθηναίοισιν ἐκεῖ ἐν τῆσιν αὐτέσιν πόλεσιν.

(2) From the treaty of alliance between Athens and Leontini in 433 B.C.:

ἐπ' Ἀφσεύδοῦς ἄρχοντος καὶ τῆς βολῆς ἔει Κριτιάδης ἐγραμμάτευσ, ἔδοχσεν τῆ βολῆι καὶ τῷ δέμῳ... Τῆμ μὲν χσνυμαχίαν εἶναι Ἀθηναίοισιν καὶ Λεοντινίοισιν καὶ τὸν ὄρκον δῶναι καὶ δέχσασθαι.

732. The most artificial of all literary dialects has been reserved for this

Epic.

place because traces of all the spoken dialects which precede may be found in it. This is the epic dialect found first in the *Iliad* and *Odyssey*, later in Hesiod, and retained permanently as the dialect of epic and elegiac poetry. Even in the earliest times it is not a uniform dialect, the *Odyssey* differing in some respects from the *Iliad* and both from Hesiod. Differences may be detected also between the main body of the *Iliad* and *Odyssey* and those parts which ancient or modern research has identified as later additions or interpolations. Still more remote from the Homeric style is that of the early Ionic philosophers, who adopted the epic hexameter because a prose style had not yet developed. Late writers like Apollonius Rhodius are simply imitators of Homer and many of their forms are incorrect.

In the Homeric poems the great mass of forms is Ionic, whence Homer is often described as old Ionic. There is, however, a considerable Aeolic element, the presence of which can be explained only by supposing that the poems, Ionic as we have them, were founded on earlier poems in Aeolic, a process to which many parallels in other literatures could be adduced. To this Aeolic element belong forms like *ταλαύριμος*, *καλαῦροψ*, *εὔαδε*, where

ϕ has coalesced with a previous vowel into a diphthong, *πίσυρες* of different quantity from the Ionic *τέσσερες*, case-forms like *Ἄτρείδαο* beside *Ἄτρείδew*, *ἄνδρεσσι* beside *ἄνδρασι*. At the period when the earliest parts of the poems were composed, Ionic was no doubt more like Aeolic than it was in historical times. The change of *ā* to *η* must have taken place after Ionia was colonised, for the Greeks of Cyprus knew the Medes as *Māδοι*, the older form, while the Ionians, also taking over the word in this form, have converted it into *Mῆδοι*. We have no evidence how early *ϕ* disappeared from Ionic, but it was entirely lost in historical times, while Aeolic retained it. It is required for the scansion of Homer, but the old scansion might have gone on after the pronunciation changed, just as in English *an University*, *such an one* are still written, though in present-day pronunciation both *University* and *one* begin with a consonant, rendering the *n* of the article unnecessary. The genitive in *-οιο*, which survives sporadically in Thessalian, was an archaism in Homer's time, for it is used specially in stereotyped phrases: *διέπρησσον πεδίοιο*, etc.

On the other hand many of the Homeric forms became modernised, so that the greatest critic of antiquity, Aristarchus, thought that Homer must have been an Athenian. These modifications sometimes took place contrary to the metre, *ἔως* and *τέως* being written where the metre clearly requires *ῆος* and *τῆος*. The forms of the contracting verbs *ὄρω*, *ὄρας*, and some noun-forms like *φῶς* for *φάος* suggest that the earlier forms had been contracted to *ὄρῶ*, *ὄρᾶς*, *φῶς* and again expanded to suit the metre by doubling the resulting vowel-sound. Other forms which indicate Attic influence are *οὔν* (all dialects except Attic write *ὄν*), *τέσσαρες* not *τέσσερες*, *μείζων* not *μέζων*, etc.

733. The other dialects of the Greek world may be grouped together as Doric, though there are considerable differences between the Doric of Locris, Phocis, Achaia and northern Elis and that of the other Dorians of the Peloponnese and of the Dorian islands and colonies in the East and West. The characteristics which mark off Doric from Aeolic and Ionic are: *-μες* in 1st per. plural: *αε* contracting into *η*: locatives in *-ει*: aorist and future in *-ξ-*: infinitives in *-ειν*, and *λάω* used for 'wish.' Doric had a special form of accentuation which is very imperfectly known.

(a) Laconian. In the language of the Spartiates, from about 450 B.C., *σ* between vowels becomes *h* as in *μῶ^hα* for *Μῶσα* (*Μοῦσα*); *θ* later became *σ*; *dy* is represented by *δδ* instead of *ζ*, *μύσιδδε* in Aristophanes' *Lysist.* 94 for *μύθιζε*. The vocabulary has many peculiar words, *ὠβά*, *βουαγός*, etc. The modern dialect (Tzakonian) of S.E. Peloponnese is said to retain several features of the old Laconian.

Example.

From an inscription dating from before 400 B.C. In the old Laconian alphabet without *η* and *ω*.

Δαμόνῶν ἀνέθεκε Ἀθαναία[ι] Πολιάχῳ
νικάας ταῦτᾶ ἄτ' οὐδὲς πέποκα τῶν νῦν.

The Laconian lyric poets Terpander, Alcman, Thaletas, Tyrtaeus, were not natives of Laconia and their language is influenced by Aeolic. Laconian forms are also found in the treaty of Thuc. v. 77, and in Aristoph. *Lysistrata*, though possibly not accurate in all respects.

Kindred forms of dialect are known from long inscriptions found at Heraclea in Magna Graecia (about 300 B.C.) with dat. pl. in -ασσι, *πρασσόνασσι*, and at Andania in Messenia (about 70 B.C.) which shows 3 pl. subj. in η, *τίθηγι*, etc.

(δ) The dialect of Argolis and Aegina (down to the expulsion of its Doric inhabitants in 431 B.C.) retained *vs* like Cretan. Later Argive adopts from Laconian the change of σ between vowels into the rough breathing.

Examples.

(1) On a bronze tablet, probably of the early fifth century B.C. :

ἄ δὲ βδὼλὰ ποτελάτῳ ἀντιτυχόνσα¹, αἰ δὲ κα μὲ, αὐτοὶ ἔνοχοι ἔντῳ ἐνς Ἀθαναίαν.

¹ 'Let the council for the time being take proceedings for recovery.'

(2) Found in Aegina near the temple of Aphaia in 1901. Before 600 B.C. :

[Κλ]εῖτα ἱαρέος ἑόντος τὰφαίαι ὄϊγος [ἐτ]έθε χῶ βῶμδς χῶλέφας (= καὶ ὁ ἐλέφας) ποτεπέθε. | [καὶ τῶργο]ς (= τὸ ἔρκος) περι[ε]ποιέθε.

(3) An inscription from Troezen of late sixth or early fifth century illustrates the adoption of Epic phrases in Doric.

Πραξιτέλει τόδε μῆμα ρίσον ποίρῆσε θανό[ντι
τ]οῦτο δ' ἐταῖροι σᾶμα χέαν βάρεα στενάχοντες
φέρῶν ἀντ' ἀγαθὸν κέπάμερον ἐξετέλεσ(σ)α[ν].

The inscriptions from Asclepius' temple at Epidaurus show a later, more ordinary Doric, with *ποι* for *πρός*, and, in the poems of Isyllus, a mixture of dialectic forms.

(ε) Corinthian : its early form preserved Ϝ, *F* after consonants (*Δφεινία*, ὄρφος), and wrote *χσ*, *φσ* for *ξ*, *ψ*. A very similar dialect was naturally used in Sicyon, Corcyra and Syracuse.

Examples.

(1) Ἰόραχς. Ποτειδανός εἰμ' ἄγοιτις. Περαιέθεν ἴφομες.

(2) A Corcyrean tomb-inscription, probably of the sixth century B.C. :

Σᾶμα τόδε Ἀρνιαδά Χάροπος· τὸν δ' ὄλεσεν Ἄρες
βαρνώμενον¹ παρὰ ναυσὶν ἐπ' Ἀράθθιοιο, ρ'οφαίσι
πολλὸν ἀριστεύοντα κατὰ στονόρεσ(σ)αν ἀφυτάν.

¹ = *μαρνώμενον*.

(δ) Syracusan is probably given with fair accuracy in the fragments of Epicharmus and Sophron. The only prose author of note is Archimedes, the writer on mathematics and physics, whose Doric has suffered a good deal in transcription.

Examples.

(1) From Epicharmus' Ἐλπὶς ἢ Πλοῦτος (Frag. 35):

ἔρω δ' ὀλισθράζων τε καὶ κατὰ σκότος
 ἔρημος· αἶ κα δ' ἐντύχω τοῖς περιπόλοις,
 τοῦθ' οἶον ἀγαθὸν ἐπιλέγω τοῖς θεοῖς, ὅτι
 οὐ λῶντι πλείον ἀλλὰ μαστιγοῦντί με.

(2) From the fragments of Sophron: ἔτι μεθὲν ἁ καρδία παδῆ. Ἡρακλῆς
 τοῦς κάρρων ἦς. ἐκπεφάναντί τεος ταὶ δυσθαλίαι.

The dialect of Theocritus in the Bucolic idylls is often said to be mainly Syracusan of the third century B.C. In some of the idylls however, as *ii.* and *vii.*, where the scene is laid in Cos, the dialect is as likely to be the Doric of that island, in which Theocritus spent some years. In the Doric of Theocritus there are a considerable number of Aeolic forms: *Μοῖσαι*, *ἔχουσα*, *νίκημι*, etc., which were no doubt derived from the Aeolic lyric school. His dialect is therefore to some extent artificial, and, according to the mss., is not consistent with itself even within the same idyll. The language of Isyllus, whose poems are among the inscriptions found at Epidaurus, shows that this inconsistency may be original, and not due to the carelessness of copyists.

(e) Cretan is now well known from the long and important Gortyn inscription. Here *vs* is kept (except when final before an initial consonant), there is no *φ* or *χ*, *θ* appears, for *ζ* we find *δ* at the beginning, *δδ* in the middle of words, and final consonants are regularly assimilated to the initial consonant which follows.

Examples.

(1) From the Gortyn inscription, not later than the fifth cent. B.C.:

ἄς κ' ὁ πατὲρ δῶει, τὸν τὸ πατρὸς κρεμάτων παρ νιέος μὲ ὀνέθθαι μεδὲ κατα-
 θίεθθαι. ἄτι δέ κ' αὐτὸς πάσεται ἔ ἀπολάκει, ἀποδιδόθθῳ, αἶ κα λῆι (= ἔως ἂν
 ὁ πατήρ ζῶη, τῶν τοῦ πατρὸς χρημάτων παρ' νιέος μὴ ὀνείσθαι μηδὲ κατατίεσθαι.
 ἄττα δ' ἂν αὐτὸς πάσηται (= κτήσηται) ἢ ἀπολάχη, ἀποδιδόσθω, ἐὰν λῆ).

(2) From a Cnosian decree of proxeny at Delos (about 150 B.C.): ἦμεν
 δὲ αὐτοῖς καὶ ἐγκτησιν γᾶς καὶ οἰκίας καὶ ἀσφάλειαν πολέμω καὶ εἰρήνας καὶ
 καταπλέονσι ἐς τὸς Κνωσίων λιμένας καὶ ἐκπλέονσι.

(f) In close relationship to one another stand the islands of Melos and Thera and the colony of Thera, Cyrene. The inscriptions on the rocks of Thera are amongst the oldest Greek inscriptions, dating from at least the seventh cent. B.C. The writing is from right to left, and there is no *φ*, *χ*, *ξ*, or *ψ* in the alphabet.

Examples.

(1) From Thera. Πρακσίλα με Θ'αρμαφ'ος ἐποίη.

(2) From a statue-base at Cyrene (of the Roman period):

Ἄσκληπὸν Ἄσκληπῶ ἱαριτεύοντα τῷ Ἀπόλλωνος ἀρετᾶς ἔνεκα καὶ εὐνοίας
 ἄς ἔχων διατελεῖ... ἐς τὰν πόλιν καὶ τὸς ἱαρές, καὶ τὰς ποτὶ τὸς θεὸς χάριν
 εὐσεβείας οἱ ἱαρές τῷ Ἀπόλλωνος ἀνέθεν.

(g) Rhodian had infinitives in *-μειν*, e.g. *εσίμειν* for *εισιέναι*, and characteristic words like *κτοῖνα*, township; *μάστρος*, official.

Examples.

(1) A decree of Ialysus, third cent. B.C. :

ἔδοξε τοῖς μάστροις καὶ Ἰαλυσίοις· ὅπως τὸ ἱερὸν καὶ τὸ τέμενος τῆς Ἀλεκτρώνας εὐαγῆται, ἐπιμεληθήμειν τοὺς ἱεροταμίας ὅπως σταλαὶ ἐργασθέντων τρεῖς... θέμειν δὲ τὰς στάλας μίαν μὲν ἐπὶ τῆς ἐσοδοῦ τῆς ἐκ πόλιος ποτιπορευομένης, μίαν δὲ ὑπὲρ τὸ ἰστιατόριον.

The most important colony from Rhodes was Agrigentum, the dialect of which has the same characteristics.

(2) Τύχα ἀγαθὰ· ἡ τυγγάνοιμί κα ἐμπορευόμενος ὅπως κα δοκῆ σύμφορον ἔμειν καὶ ἄγων τῆ κα δοκῆ ἅμα τῆ τέχνα χρεύμενος.

734. As has been already mentioned the Doric dialects to the north of the Corinthian gulf, and their offshoots in Achaia and northern Elis, differ considerably from ordinary Doric. By some they are made a separate group under the name of the North-western dialects. They contain no literature. The older forms of these dialects are uncouth and difficult: *αρ* constantly appears for *ερ*, as in *φάργον* for *ἔργον*, *πατάρα* for *πατέρα*; *στ* appears for *σθ* in verbal terminations, *λυσάστω*, etc.; consonant stems have the dative plural in *-οις*, *ἀγώνοις*, etc.; pres. participles passive of verbs in *-εω* end in *-είμενος*, *-ήμενος*, *καλείμενος*; *ἐν* is used for *εἰς*. In Delphian a fossilised ablative case is found: *φοῖκω* = *οἴκοθεν*.

Examples.

(1) Locrian. From an inscription of the fifth century B.C. giving regulations for a colony to Naupactus (*δέιλομαι* occurs for *βούλομαι* as *δήλομαι* does in the Doric of the Peloponnese and islands):

ἐν Ναύπακτον κα(τ) τῶνδε ἀπιφοικία... ὄσστις κα τὰ φεγαδῆγότα¹ διαφθεῖρῃ τέχνα καὶ μαχανᾶ καὶ μιᾶ, ὅτι κα μὲ ἀνφοτάροις δοκέει, Ὀποντίον τε χιλίων πλέθα καὶ Ναφπακτίον τῶν ἐπιφοίγον πλέθα, ἄτιμον εἶμεν καὶ χρέματα παματοφαγεῖσται².

¹ pft. ptcp. of *ἀνδάνω*.

² be confiscated.

(2) From the regulations of the phratry of the Labyadai at Delphi; about the end of the fifth cent. B.C. :

ταγευσέω¹ δικαίως κατὰ τοὺν² νόμους τῆς πόλιος καὶ τοὺς τῶν Λαβυαδᾶν περ τῶν ἀπελλῶν καὶ τᾶν δαρατᾶν³. ... ὄρκος· ὑπίσχομαι ποῖ τοῦ Διὸς τοῦ πατρώου· εὐορκέοντι μέμ μοι πόλλ' ἀγάθ', αἱ δ' ἐφιορκέοιμι, εἶμεν τὰ κακὰ ἀντὶ τῶν ἀγαθῶν.

¹ I will perform the duties of *ταγός* (head or manager of the affairs of the phratry).

² *τοὺς* with *-s* assimilated to following *ν*.

³ ἀπελλ. sacrifices at a Delphic festival called ἀπελλᾶι. *δαρ.* a sacrifice for the young men and maidens.

The older Elean inscriptions are found at Olympia: they show ζ for δ, δ for ζ, ρ for final σ.

(3) From a Treaty of early sixth cent. B.C. :

ἀ φράτρα τοῖς φαλείοις. Πατρίαν θαρρῆν καὶ γενεὰν καὶ ταῦτῳ· αἱ ζέ τις
καταραύσει¹, φάρρην², ὄρ φαλείῳ³. αἱ ζέ μέπιθίαν τὰ ζίκαια ὄρ μέγιστον τέλος
ἔχοι καὶ τοῖ βασιλάες, ζέκα μναῖς κα ἀποτίνοι φέκαστος τῷ Ζι Ὀλυμπίῳ.

The precise purport of this inscription is disputed. The most plausible explanation of this clause is to take Πατρίαν as the name of a person who is to be protected against sacrifice intended to do him hurt by the magistrates, these being subject to a penalty for neglect of this duty.

¹ = καθιερύσειε in form, like κατεύχοιτο in meaning.

² i.e. ἔρρειν = φεύγειν in meaning.

³ ὡς Ἡλείου (δῶτος).

(4) Decree of third cent. B.C. : ἦμεν δὲ καὶ ἀσφάλειαν καὶ πολέμω καὶ
εἰράναρ καὶ γὰρ καὶ βοικίαρ ἔγκτησιν καὶ ἀτέλειαν καὶ προεδρίαν ἐν τοῖρ
Διονυσιάκοιρ ἀγῶνοιρ.

The later inscriptions of Locris, Phocis, and Elis are much less uncouth and difficult. Under the influence of the Aetolian league in the third and second century B.C., a kind of literary dialect for official documents grew up, founded on the characteristics of this group, and through it the dative of consonant stems in -οις spread to other parts of Greece.

(5) A fragment of an Achaean sumptuary law :

Δαματρίοις τὰς γυναῖκες μήτε χρυσίον ἔχεν πλέον ὀδελοῦ ὀλκάν, μηδὲ λωπίον
ποικίλον, μήτε πορφυρέαν, μήτε ψημυθιοῦσθαι, μήτε αἰλῆν. Εἰ δέ κα παρβάλ-
ληται, τὸ ἱερὸν καθαράσθω ὡς παρσεβέουσα.

(6) From an axehead found in South Italy (from an Achaean colony) :
τὰς Ἐρας ἱαρός ἐμι τὰς ἐν πεδίοι· Ἰυνίσκος με ἀνέθεκε ὄρταμος¹ φέργῶν δεκάταν.

¹ = ὁ ἄρταμος, 'the slayer of the sacrifice,' or simply = μάγειρος.

735. The literary dialect of the great choral poets Stesichorus, Ibycus, Pindar, Simonides, Bacchylides was in the main Doric, though interspersed with Epic and Aeolic elements. Pindar's language has no relation to his native tongue, Boeotian, and Simonides and Bacchylides were Ionians from Ceos. Stesichorus, who was of Himera, a town founded by a mixed colony of Ionians from Zancle and Dorians from Syracuse, was the originator of the literary dialect which, with its mixture of Doric and Epic elements, was henceforth regarded as that appropriate to choral poetry. That Aeolisms are not found in his scanty fragments is hardly sufficient reason for attributing their introduction only to his successors. As the poems were sent to all parts of the Greek world to be sung on festal occasions, it is clear that a dialect with very marked local characteristics like Boeotian would have been an unsuitable, because an unintelligible medium. In the long fourth Pythian, written for Arcesilaus of Cyrene, a Dorian prince, there are many Epic forms but no special Aeolisms. In Bacchylides and Simonides there is a larger Ionic element than in Pindar. Variations in dialect apparently were often utilised for euphony; thus Bacchylides uses φήμα and ἀδμήτα instead of the pure Doric φάμα, ἀδμάτα, in order to avoid repetition of the same sound, but admits ἄδματοι where the ending is different.

Dialect of
the choral
poets.

The only Doric prose besides Archimedes of Syracuse is the philosophical prose of the Pythagorean school of Southern Italy, preserved in numerous fragments by later writers. Part of a Doric treatise on rhetoric has recently been discovered in Egypt.

736. As soon as Greece passed beyond the stage of small independent

The κοινή
διάλεκτος.

States the dialects began to decay, although it was many centuries before they ceased to be the speech of the common folk. The existence of the Athenian empire tended to

develop a common dialect between Athens and her allies, but the fall of Athenian power in 404 B.C. prevented the immediate completion of the process. During the fourth century, however, Greek soldiers of fortune became more numerous, and served for longer periods abroad. The effect of foreign residence upon the language of an educated man may be studied in the works of Xenophon, whose writings, both in vocabulary and syntax often differ from Attic. Amongst the orators Hypereides seems to have been the greatest innovator. The Macedonian conquest greatly accelerated the levelling of the Greek dialects. Attic was adopted as the court language of Macedonia, and Attic formed the basis of the dialect which now became coextensive with Greek civilization. Foreign writers living at Athens, like Aristotle and Theophrastus, form the link between the Attic dialect and the κοινή, though both of these authors aimed at Attic diction. The first writer in the new dialect, whose works are preserved on a large scale, is Polybius, who shows the -ττ- and -ρρ- of Attic in such forms as *ἡττήθησαν*, *ἐξέταττε*, *κατατεβαρρηκότων*. The κοινή generally, however, has -σσ- not -ττ-. It is represented in the official papyri of Egypt under the Ptolemies, and in the inscriptions of Pergamum in a form closely resembling the language of Polybius. In vocabulary and construction it contains other elements than Attic, part at least being derived from Ionic. Alongside the formal language thus represented there existed a spoken idiom much farther removed from Attic. Of this the best representative in literature is the language of the Greek New Testament. Under the Roman Empire a literary reaction against the κοινή set in, and writers attempted to imitate the Attic of the best period. The greatest success in this movement was achieved by Lucian, who also made a study of the Ionic dialect. This revival was necessarily founded upon the book language, as were also the Aeolic epigrams of Balbilla, an attendant upon Hadrian's Empress. Neither Lucian nor Balbilla is of value for dialect study, but they show that at this period an antiquarian interest was taken in the dialects, which by this time in many places were almost or altogether extinct.

For further details with regard to dialect characteristics see Giles, *Short Bibliography*. *Manual of Comparative Philology*, Appendix B (with a selection of inscriptions), or the special works by Buck, *Introduction to the study of the Greek Dialects* (Grammar, selected inscriptions, glossary), 1910, and Thumb, *Handbuch der griechischen Dialekte* (1909). No complete treatise on a large scale at present exists for the whole of the dialects. The best work is Hoffmann's *Die griechischen Dialekte*, of which three volumes dealing with

Arcadian, Cyprian, Thessalian, Asiatic Aeolic and the phonology of Ionic have been published. Meister's revision of Ahrens, *De Graecae Linguae dialectis*, stopped short after two volumes containing Thessalian, Asiatic Aeolic, Boeotian, Elean, Arcadian and Cyprian had been published. Prof. H. Weir Smyth published an elaborate work on Ionic in 1894 (Clarendon Press). There is a handy selection of dialect inscriptions edited by Solmsen (Teubner), and new volumes of the Berlin *Corpus (Inscriptiones Graecae)* appear almost every year, the important dialect material of which is collected also in the *Sammlung der griechischen Dialektinschriften*, edited by H. Collitz and F. Bechtel with the help of many other scholars. This collection, which after more than thirty years is almost completed, includes in the index volume recent discoveries of importance, and also valuable grammars of the various Doric and Ionic dialects compiled by Hoffmann with the co-operation of other scholars. The characteristics of Attic as shown in inscriptions will be found most conveniently in Meisterhans' *Grammatik der attischen Inschriften* (ed. 3 edited by E. Schwyzer). The *Lexicon Graecum Suppletorium* (2nd edition), by Herwerden, is useful for words not recorded in the ordinary dictionaries.

VIII. 2. EPIGRAPHY.

737. GREEK Epigraphy may be conveniently defined as the study of documents inscribed or incised on permanent material, such as stone or metal, or occasionally wood, though the latter has rarely survived except in Egypt. It therefore includes the inscriptions upon coins, gems, seals, rings, weights, stamps, and like objects; and in the case of pottery, it is usually taken to include graffiti scratched with a sharp point, and even painted inscriptions which are made before firing as part of the design of a vase, but not written documents (ostraka), in which pot-sherds are merely used as a material to write on instead of papyrus. On the other hand, documents incised with a stylus on wax, usually spread on wooden panels, are generally considered, from the character of the writing, to belong to the domain of palaeography. It follows that epigraphy is mainly concerned with the simpler and more monumental forms of the letters, though cursive forms occasionally intrude, especially in later inscriptions. As regards date we may exclude from consideration inscriptions of a later time than that of the fall of the Byzantine Empire (A.D. 1453); for classical literature indeed the interest ceases with the second century A.D. As regards language we may exclude documents written in a Greek character but in a non-Hellenic dialect, e.g. the half-barbaric inscriptions of Asia Minor (*Aspendus*, etc.), the Cretan (of *Praesos*, etc.) and the Celtic inscriptions. On the other hand the language of the Cypriote inscriptions is Greek, but the script is syllabic, not alphabetic, and non-Hellenic. Yet one more limitation: epigraphical interpretation in the fullest extent presupposes an encyclopaedic knowledge; in the narrower sense here to be understood the science of the

Definition
and scope.

written characters and of the written formulae of Greek monumental literature constitutes the proper domain of Greek Epigraphy.

738. Down to about the end of the fifth century B.C., there was no common alphabet recognised by all the Greek States, but each had its own local variety; and though there were certain elements in common to all, there were also differences in the form of letters, in their significance and in alphabetic order. The common elements are most of them—though not all—to be found in early Phoenician inscriptions; and therefore it has

Origin and composition of the Greek alphabet.

common alphabet recognised by all the Greek States, but each had its own local variety; and though there were certain elements in common to all, there were also differences in the form of letters, in their significance and in alphabetic order.

The common elements are most of them—though not all—to be found in early Phoenician inscriptions; and therefore it has



Fig. 169. Clay tablet with incised writing found at Cnossus.

commonly been held, both by Greeks themselves and by modern epigraphists, that the various forms of Greek alphabet were derived from the Phoenician. A new aspect has been given to this problem by Sir Arthur Evans' discovery of a system of writing used in Crete during the second millennium B.C. (Fig. 169). This system is entirely independent of the hieroglyphic or other scripts known to have existed at an earlier date in Egypt and Asia, and appears to be derived from an earlier hieroglyphic system in Crete itself. There has been found in Crete, in addition to these, an example of a different system, with symbols impressed by a sort of type,

on a terracotta disc from Phaestus (Fig. 170). It has been conjectured, partly because of a certain resemblance to the Hittite hieroglyphs, that this disc was imported from Asia Minor. None of these scripts has been satisfactorily deciphered as yet; the Cretan documents mostly consist of tablets of clay, incised and then baked. Most of them seem to be of the nature of inventories or accounts; it is not known whether the script was used for



Fig. 170. Clay disc with impressed characters found at Phaestus.

literary purposes. In addition to these Cretan discoveries, signs of a similar nature have been found scattered over various regions around the Mediterranean basin, though it is often by no means certain what, if any, was their syllabic or alphabetic value. There existed therefore, at the time when the Greek alphabet was in course of development, an abundant repertory of signs, many of them already adapted in various systems to the

Phoenician Names	Greek numerals	Baal Lebanon	Moab	Thera	Crete	Miletus	Paros &c.	Athens	Corinth	Elis	Chalcis & col.
1 Aleph	1	𐤀	𐤀	Α	Α	Α	Α	Α	Α	Α	Α
2 Beth	2	𐤁	𐤁	Β	Β	Β	Β	Β	Β	Β	Β
3 Gimel	3	𐤂	𐤂	Γ	Γ	Γ	Γ	Γ	Γ	Γ	Γ
4 Daleth	4	𐤃	𐤃	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
5 He	5	𐤄	𐤄	Ε	Ε	Ε	Ε	Ε	Ε	Ε	Ε
6 Vau	6	𐤅	𐤅	Ϝ	Ϝ	Ϝ	Ϝ	Ϝ	Ϝ	Ϝ	Ϝ
7 Zayin	7	𐤆	𐤆	Ζ	Ζ	Ζ	Ζ	Ζ	Ζ	Ζ	Ζ
8 Cheth	8	𐤇	𐤇	Θ	Θ	Θ	Θ	Θ	Θ	Θ	Θ
9 Teth	9	𐤈	𐤈	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ι
10 Yod	10	𐤉	𐤉	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ
11 Kaph	20	𐤊	𐤊	Κ	Κ	Κ	Κ	Κ	Κ	Κ	Κ
12 Lamed	30	𐤋	𐤋	Λ	Λ	Λ	Λ	Λ	Λ	Λ	Λ
13 Mem	40	𐤌	𐤌	Μ	Μ	Μ	Μ	Μ	Μ	Μ	Μ
14 Nun	50	𐤍	𐤍	Ν	Ν	Ν	Ν	Ν	Ν	Ν	Ν
15 Samekh	60	𐤎	𐤎	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ
16 Ayin	70	𐤏	𐤏	Ο	Ο	Ο	Ο	Ο	Ο	Ο	Ο
17 Pe	80	𐤐	𐤐	Π	Π	Π	Π	Π	Π	Π	Π
18 Tsade	(900)	𐤑	𐤑	Τ	Τ	Τ	Τ	Τ	Τ	Τ	Τ
19 Qoph	90	𐤒	𐤒	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ
20 Resh	100	𐤓	𐤓	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ
21 Shin	200	𐤔	𐤔	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ
22 Tau	300	𐤕	𐤕	Τ	Τ	Τ	Τ	Τ	Τ	Τ	Τ
23	400			Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ
24	500			Ϝ	Ϝ	Ϝ	Ϝ	Ϝ	Ϝ	Ϝ	Ϝ
25	600			Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ
26	700			Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ
27	800			Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ	Ϟ

Table of Phoenician and early Greek local alphabets.

phonetic expression of language. The Phoenician was one of these systems; and it seems probable that to the Phoenicians must be assigned the credit of first inventing a purely alphabetic system of writing, at least as far as the consonants are concerned, only the three long vowels *a, i, u* being also represented. The Greeks improved on this by adopting separate symbols for the five chief vowel sounds, and in some cases also for the long vowels *e* and *o*. In doing this, they used to a considerable extent the same set of symbols as were used by the Phoenicians, and in the same alphabetic order, the symbols used for vowels being those which in Phoenician appear as the 'breaths' aleph, he, yod, ayin, with the addition of *u*, probably a modification of *vau*. The table on p. 690 shows the Phoenician alphabet, and a selection of typical early Greek local alphabets.

739. It will be seen from the table that, so far as the first 22 letters are concerned, the various local Greek alphabets strongly resemble the Phoenician, though they preserve many forms that seem more primitive in character than any Phoenician inscriptions that are known to us. The numeral order of the letters, as given in the third column, shows a similar alphabetic order; and this is confirmed by various early abecedaria which have been found, e.g. Fig. 173. To the 22 letters all add Υ , and many also the signs $\Phi \chi \Psi$, all of which exist in the Cretan script; but some of the earliest alphabets do not possess these signs, and those that do vary in their use of them; Ω , which is probably differentiated from \circ , is found only in the Ionic and its derivatives. The most probable explanation of these facts seems to be that the Greek alphabet was not derived from any form of Phoenician that is known to us, but either from some more primitive form of Phoenician or from some more primitive system from which the Phoenician was also derived; and that various local groups of alphabets supplemented this system, to meet their requirements, from some common sources, making varied use of what was borrowed. The main variation was between the eastern and western groups, of which the former used the symbols Φ, χ, Ψ , for ϕ, χ, ψ , in the order given, while the latter, as may be seen in the last two columns of the table, used them in the order Φ, Ψ, χ and with the significance ϕ, χ, ξ .

EASTERN GROUP. A (1). *Ionic*. This contains all the letters of the Greek alphabet now in use, including ω . It is found on the earliest inscriptions of Miletus, and at Naucratis. Later it was universally adopted; see § 740.

A (2). *Cities on the coast of Asia Minor with colonies*. The ancient alphabet of Teos, Colophon, Rhodes is thought to be that of the inscriptions engraved (circa 590 B.C.) by Greek mercenaries on the colossal figures at Abu Simbel in Egypt (see Fig. 176). It is Ionic *minus* Ω and with Θ standing for the *spiritus asper* (but not in Fig. 176), as well as for a long vowel, the use to which it is limited in Ionic. It has also the *koppa*.

B. *The Islands of the Aegean*: (i) *Thera* (see Figs. 172, 174), *Melos and Crete* (see Figs. 175, 177). These have no non-Phoenician signs¹; they have crooked *iota*, σ in the form of *san*, ϵ -sounds denoted by ξ and η which stands for both *spiritus asper* and η , while in Crete complete *psilos* or absence of aspirate prevails. (ii) *Paros, Siphnos, Thasos, Delos, Naxos* (see Fig. 178), *Ceos*. All these have Λ for γ as in Attica, and a peculiar form ζ for β ². Except in Ceos, they retain *koppa*. They all have ϕ , χ but no ψ ; η in Paros, Siphnos, Naxos = *spiritus asper*; and they are all characterised by peculiarities in the representation of the ϵ -sounds. In Paros, Siphnos, Thasos, Delos the values of the σ -symbols are strangely reversed: $\circ = \omega$, $\Omega = \alpha$, ou .

C. *The Mainland of Hellas: Attica* (see Figs. 179, 180), *Argos, Corinth* (see Figs. 181—183) and its colonies, *Phlius, Sicyon, Megara and its colony Selinus, and Aegina*. These occupy a position intermediate between the Eastern and the Western division and are eclectic. They have the non-Phoenician signs ϕ , χ and, except in Attica and Aegina, ψ (in Attica represented by $\phi\zeta$, as ξ is by $\chi\zeta$), with their Eastern values. *Koppa* is in use in the earliest period³. η is *spiritus asper* and not η . *Digamma* is present except in Attica⁴.

WESTERN GROUP. D. *States of Northern Greece*. E. *States of Peloponnesus*. The alphabets are characterised by the use of $\psi = \chi$ (Fig. 184, *Achaia*, Fig. 185, *Elis*) and $\chi = \xi$. Ω is absent; ψ in Ozolian Locris and on coins of the Arcadian Psophis has a special symbol, \ast .

¹ But in Thera and Melos, in a few archaic inscriptions, Ψ occurs, with the value however of ξ , while ζ is denoted by Ξ . Further $\chi = \chi$ appeared before $\mathcal{M} = \sigma$ disappeared.

² Local varieties of β occur also in Thera (Fig. 174), Melos (where at a certain period $\zeta = \alpha$, ou), Crete (Fig. 175), Corinth, where $\beta = \epsilon$, η (Figs. 182, 183), Megara.

³ An archaic Attic vase-inscription (Fig. 180) contains crooked *iota*.

⁴ $\nu\alpha\acute{\iota}\nu[\pi\eta\gamma\acute{o}\varsigma]$, $\acute{\alpha}\nu\tau\acute{\alpha}\rho$ (sixth century B.C.) and $\acute{\alpha}\omega\sigma$, assigned to the fourth, are probably not of Attic origin.

TRANSCRIPTION OF TEXTS ON p. 693.

171. (*Naucratis*) ω^3 'πόλλω, σού εἰμί.
 172. (*Thera*) 'Ρηξάνωρ. Ἀρχαγέτας. Προκλήης. Κλεαγόρας Περαιεύς.
 173. (Vase from Formello) $\alpha \beta \gamma \delta F \epsilon \zeta \eta \theta \iota \kappa \lambda \mu \nu$ [ξ] $\circ \pi$ [*san*] $\varrho \rho \sigma \tau \upsilon$
 $\xi \phi \chi$.
 174. (*Thera*) Ἀβρωνος ἠ< ϵ >μί.
 175. (*Gortyn*) ...λεβήτας $F\xi\xi$ τον...
 176. (*Abu Simbel*) Βασιλέος ἐλθόντος ἐς Ἐλεφαντίναν Ψαμ(μ)σίχου, | ταῦτα
 ἔγραψαν τοὶ σὺν Ψαμματίχῳ τῶ Θεοκλ(έ)ος | ἔπλεον· ἦλθον δὲ Κέρκιος κατ'ὑπερθε,
 νῆς ὁ ποταμὸς | ἀνίη· ἀλ(λ)ογλώσσ(σ)ους δ' ἦχε Ποτασιμῶ, Αἰγυπτίους δὲ Ἀμασις.
 ἔγραφε δ' ἄμὲ Ἀρχων Ἀμοιβίχου καὶ Πέλεκος Οὐδάμου.

INPTOZP N O 7 P

Fig. 171.

ΑΒΓΔΕΕΤΘΙΚΛΜ ΝΞΟΡ ΠΡΣΤΥΧϚϛ

Fig. 173.

ΜΟΤΜ Ϛ ΕΤΙ ΜΑΤ Η Θ Ϛ

Fig. 175.

Ϛ ΟΥΑΜ ΚΡ Ϛ
ΑΡΡΒΑΓΕΤΑΜ
ΣΡΟΚΤΒΜ
ΣΜΑ Ϛ ΟΥΑΤΚ

Fig. 172.

ΣΜΕΒΜ Ϛ Ϛ Ϛ Α

Fig. 174.

ΒΑΣΙΛΕΟΞΕΧΘΟΝΤΟΣΕΞΕΧΘΑΝΤΙΝΑΝΥΑΜΑΤΙΧΘ
 ΝΑΥΤΑΕΓΡΑΥΑΝΤΟΙΣΥΝΥΑΜΑΝΑΤΙΧΘΙΤΟΘΕΟΚΝΟΣ
 ΕΡΝΕΔΝΗΘΝΔΕΚΕΔΚΙΟΣΚΑΤΥΡΕΘΕΙΝΙΣΟΠΟΤΑΜΟΣ
 ΑΝΙΘΑΥΟΓΡΟΣΟΔΒΤΕΠΟΤΑΣΙΜΤΟΑΙΓΥΠΤΙΟΣΔΕΡΜΟΣΙΣ
 ΕΓΡΑΦΕΔΑΜΕΑΡ ΤΟΝΑΜΟΙΒΙΧΘΚΑΙΠΕΛΕΘΟΣΟΨΔΑΜΟ

Fig. 176.

For transcription see p. 692.

F or \sqsubset = *digamma* is nearly always present. E and O represent all the *e*- and *o*-sounds respectively, and Ϟ or ϟ is *spiritus asper*, which however is entirely absent from Elean inscriptions; see Fig. 185 (ῶριϞ = ῶστιϞ).

740. The Ionic alphabet (Fig. 186) gradually supplanted the epichoric alphabets. At Athens in the archonship of Euclides 403 B.C. it was decreed that in future all public acts should be engraved in the Ionic characters, which had in private documents been in use for some decades previously. Within a very few years all the other States which used non-Ionic alphabets followed the lead of Athens. Some of them may even have set the example of reform to Athens. But the Ionic alphabet itself underwent changes, especially after the third century B.C., as regards the form of individual letters; they were altered sometimes by way of simplification, sometimes by way of elaboration or embellishment. Thus A might appear as Λ , Λ , Δ , Δ (*i.e.* with *apices*), or might revert to a more ancient form as A or Δ ; E became ϵ ; Ϛ became Ϛ ; Ϟ become Ϟ and Ϟ ; Ϟ became Ϟ , Ϛ , Ϛ , Ϛ etc.; Ϟ became Ϟ , Ϟ , Ϟ ; Ϟ became Ϟ , Ϟ , Ϟ ; Ϟ in Attica for a considerable portion of the fourth century B.C. appears as Ϟ , and at various times as Ϟ , Ϟ , Ϟ , Ϟ ; Ϟ became Ϟ , Ϟ , etc. The forms in fact more and more assimilated themselves to the cursive forms in use in MSS. and especially papyrus MSS., in which *e.g.* are found in use more early examples of 'lunated' forms of σ (Ϟ) than appear on stones¹. The use of these later forms of the Ionic letters came in gradually; thus Ϟ is found in the second century B.C., Ϟ not till nearly the beginning of the first; but in the period of the empire we find not only an occasional recurrence to archaic forms, but also an indiscriminate

¹ Lunated σ appears sporadically on Old Attic boundary-stones.

TRANSCRIPTION OF TEXTS ON p. 695.

177. (*Gortyn*) ...τὸν ἀνπαντόν, καὶ μὴ ἐπάνανκον ἤμην τέλλεν [τὰ τῶ | ἀν]παναμένω καὶ τὰ κρήματ' ἀναιλ(ῆ)θαι ἄτι κα κατα[λίπη]μι ὁ ἀν]πανάμενος· πλίω δὲ τὸν | ἀνπαντόν μὴ ἐπικωρῆν. [Αἰ δ' | ἀπο]θάνοι ὁ ἀνπαντὸς γνήσια | τέκνα μὴ καταλιπών, πὰρ τὸ[ν] τῶ ἀνπ]αναμένω ἐπιβάλλονταν|ς ἀκωρῆν τὰ κρήματα. Αἰ δ[έ] κα | λῆ ὁ ἀνπανάμενος, ἀποφειπ[άθω] κατ' ἀγορὰν ἀπὸ τῶ λά[ω] δ[ὲ] ἀπα]γορεύοντι, καταφελμέν[ων] τῶν πολιατῶν· ἀνθέμ[ην] δὲ | δέκ]α [σ]τατήρα[ς] ἐδ[ὲ] δικαστήριον.

178. (*Naxos*) Νικάνδρη μ' ἀνέθηκεν [ε]κ[ηβόλ]φ Ἰσχειρήν, φούρη Δεινοδίκεω τοῦ Ναξίου, ἔξοχος ἀλλ(λ)έων, Δεινομένεος δὲ κασιγνήτη, | Φράξου δ' ἄλοχος μ....

179. (*Athens*) ὃς νῦν ὀρχηστῶν πάντων ἀταλώτατα παίζει, τοῦτο δεκά[ν] (?) μίν.

180. (*Athens*) [Εἴτ' ἀστό]ς τις ἀνὴρ εἶτε ξένος | ἄλλ(λ)οθεν ἐλθὼν,

Τέτ(τ)ιχον οἰκτίρα[ς], ἄνδρ' ἀγαθὸν παρίτω;

*Εν πολέμῳ | φθίμενον, νεαρὰν ἦβην ὀλέσαν[τα].

Ταῦτ' ἀποδουράμενοι νεῖσθ' ἐπὶ πρῶγμ' ἀγαθόν.

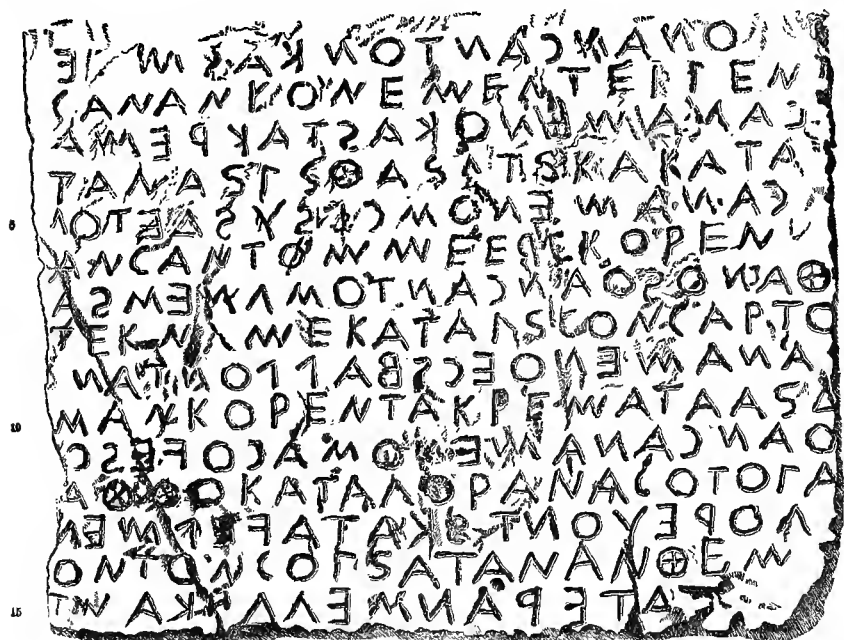


Fig. 177.

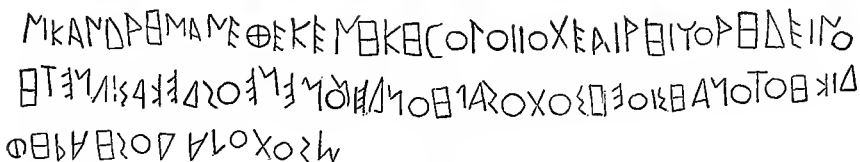


Fig. 178.

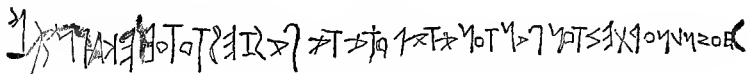


Fig. 179.

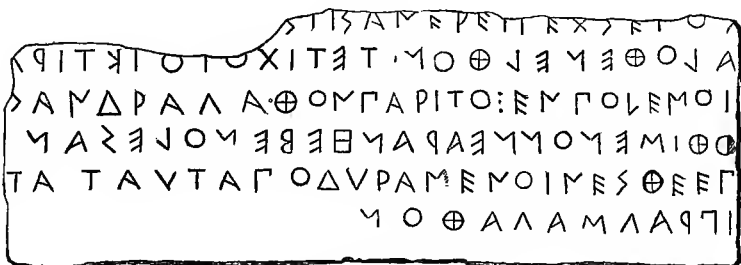


Fig. 180.

For transcription see p. 694.

use of forms of different periods even on the same inscription: one Attic inscription, I. G. III. 1, 1197 (A. D. 238—244), has no fewer than six forms of *a*.

741. At first Greek writing, like Phoenician, appears to have been invariably from right to left or 'retrograde' (ἐπὶ τὰ λαῖα ἐκ δεξιῶν, Paus. v. 25, 9) (see Figs. 171, 174, 175, 179, 184).

Then followed a transition period, that of the βουτροφῆδόν style (winding as one ploughs with oxen), in which the first line is 'retrograde' and the second left to right, and so on (ἀπὸ τοῦ πέρατος τοῦ ἔπους ἐπιστρέφει τῶν ἐπῶν τὸ δεύτερον ὡσπερ ἐν διαύλου δρόμῳ (ib. v. 17, 6) (see Figs. 177, 178, 185). By the beginning of the fifth century B. C. the later or left to right style had taken root and it is rare to find a βουτροφῆδόν inscription after 500 B. C. Frequently, and especially in Attic inscriptions after Euclides, the letters though read horizontally are arranged also in vertical lines (στοιχηδόν), a peculiarity obviously of great importance for restoring lacunae.

742. The use of **compounded letters**, as NE = NE,

Ligatures, Abbreviations, Compendia, Stenography. ΗΚ = ΗΚ, seems to have owed its origin in the main to the encroachment of cursive combinations upon the lapidary style. Examples at Athens in the centuries before Hadrian are very rare and even in the centuries following are not common, while in the cursive inscriptions of the Byzantine period the use of them is very extensive. **Abbreviations** are found sporadically even in the earliest times, e.g. Ἀπόλ(λ)ωνος Δυκ. (= Δυκείου) εἰμί, Θεάγεος Ρύπθ (?) (*Metapontum*, before 500 B. C.), occasionally in the fifth century, e.g. τριή. (= τριήραρχος) on a list of dead (*Attica*). In the period from Euclides to Augustus they are common enough, e.g. Ἀλωπ. (= Ἀλωπεκῆθεν), but in Attic decrees not till quite late in this period. In the imperial period regular abbreviations, such as Τι=Τιβέριος, of personal names, and Καλ=Καλανδῶν, were frequent.—

Compendia are rare before Augustus, as Γ̄ = πρεσβύτερος; afterwards the use of them is frequent.—A mutilated inscription, apparently of the fourth century B. C., found on the Acropolis, appears to give directions for a system of stenography. A portion of it has been restored as follows

TRANSCRIPTION OF TEXTS ON p. 697.

181. (*Corinth*) ...ε F ζ η θ ι κ λ μ ν ο π ξ ρ san τ...

182. (*Corinth*) Ζεύς.

183. (*Corinth*) Ἀνέθηκε τῷ Ποτειδάνι.

184. (*Achaia*) τὰ θάνα Φιλλῶ Χαρμυλίδα δεκάτα[ν].

185. (*Elis*) l. 2 [ια]ρομάοι αἱ μὰ πεν... l. 3 αἴτιρ μᾶτο χρήστ[αι], l. 4 ...θαῖ Ὀλυμπία, αἱ ζα... l. 5 ...ον αἴτιρ ταῦτα πα[ρβαῖνοι] l. 6 ὁ θεοκόλο[ρ ἔριρ τόκα θεοκο[λέα, ἀποῖνοι κα...] l. 7 [τοῖ] Ζι Ὀλυμπίοι λατρα[ῖώμεν...] l. 8 [τοῖ Ζ]ῖ Ὀλυμπ[ί]οι τοῖ ζ...

186. (*Samos*, on a solid bronze votive hare, now in the British Museum) τῷ Ἀπόλλωνι τῷ Πιρη(ν)ῆ μ' ἀνέθηκεν Ἡφαιστιων.

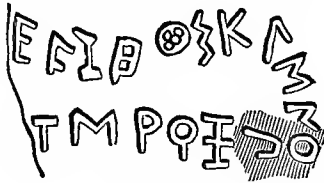


Fig. 181.

IBKM

Fig. 182.

ANBΘBKBT OΣΠOTE ΔANΣ

Fig. 183.

AKEDAV | XN M 9 A ↓ | OIT | O | AMAGAT
 IRT

Fig. 184.

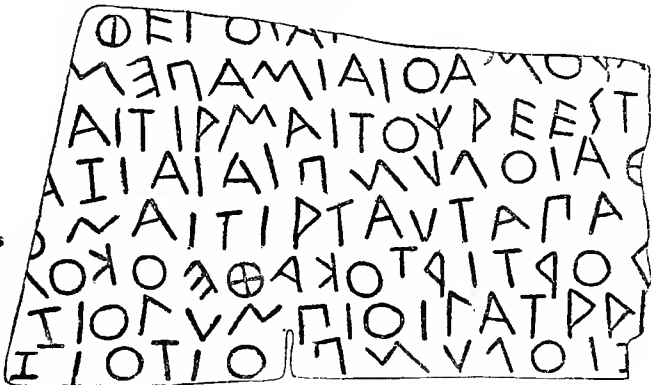


Fig. 185.

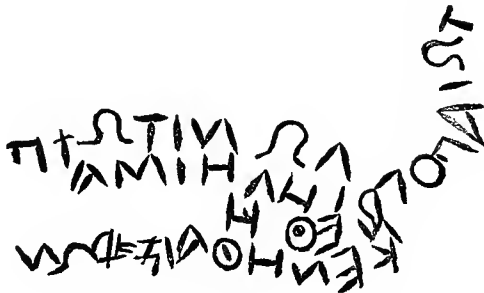


Fig. 186.

For transcription see p. 696.

(ll. 14—28): τῶν] δ' ἀφώνων ἢ [μὲν εὐθ]εῖα καὶ βρα[χεῖα γρα]μμῆ [το]ῦ φωνήεντος [κάτω μὲν] τεθείσα δύ[ναται δέλτ]α, [ἐπάνω] δὲ ταῦ, [πρὸς δὲ] τεῖ τελευτεῖ νῦ· [μετεώρ]α δ' ἐπὶ τὴν ἀρχὴν [μὲν π]ροσηγμένη πεί, [πρὸς δὲ] τεῖ τελευτεῖ μῦ· [κατὰ δὲ τὸ μέ]σον πρὸς [μὲν τ]ὴν ἀρχὴν προση[γμέ]νη βῆτα, [πρὸς δὲ τεῖ τελευτεῖ ψεί.] Thus, e.g. 7 = δι, 1 = πι, 7 = διπ, etc. (Note that the orthography εἰ = η is found in Attic inscriptions as early as 380 B.C.)

743. Separation of words by spaces is not found in inscriptions before the Roman period. Generally in Attic inscriptions punctuation (if employed at all) is effected by the sign : or ;, but

Punctuation. the usage is very capricious and frequently appears to have no connexion with grammatical construction, e.g. on a Locrian inscription I.G.A. 321: Δοζρόν τὸν : Ὑποκναμίδιον and καταλείπον:τα. Numeral signs are frequently separated from the rest of the text by two or three dots placed on the right and the left of them. Abbreviations, and at Athens proper names also, are often followed by two dots. Various other devices are found in different districts and later times.

744. To denote cardinal numbers in classical and post-classical times (demonstrably from 454 to about 95 B.C.) the following Numeral signs—
'acrophonic.' symbols were in use in Attica: | = 1, Γ = 5, Δ = 10, Η = 100, Χ = 1000, Μ = 10,000 and multiplication was expressed by symbols like Ϟ or ϙ = 50, Ϟ = 500, ϙ = 5000, ϙ = 50,000. Units of measure and money were represented by Τ = τάλαντον, Μ = μνᾶ, ξ or ζ = στατήρ, ϒ = δραχμή, | = ὀβολός, C and 3 = ἡμιωβέλιον, Τ = τεταρτημόριον, Χ = χαλκοῦς. Τ, Μ and Σ could be united with the symbols for 5, 10, 50, 100, etc., by ligatures. When no other symbol is given, drachmae are to be understood. For 5 obols the symbol is not Γ, which might be confounded with drachmae, but |||||. As examples may be taken Δϒ = 12 drachmae; ΤΤΤ = 3 talents; ΔΤΧΧΧϞΗΗϞΔΔΔΓϒϒ|||C = 11 talents, 3787 drachmae, 4½ obols. In countries, e.g. Boeotia, in which the Western variety of epichoric alphabets prevailed, ψ would take the place of χ. Thus at Orchomenus (where the fuller symbol Ϟε = ἑκατόν) ϞΓϞΗϞΗϞΗϞΗϞϞ||| = 5823; and numerous other varieties are found as, e.g. at Troezen C = 1 drachma, Σ = 10; at Argos and Nemea O or ⊙ = 10, · = 1; at Epidaurus — = 10, · = 1; thus

ΧΧΧϞϞ = — — — :: · |||| = 3277 drachmas, 5 obols.

For ordinal numerals (marks of date, etc.) there are in the classical period no special symbols.

On the other hand, as early as the fifth century B.C. we find objects numbered consecutively by the letters of the alphabet in Alphabetic. order: thus the tickets of the ten panels of heliasts at Athens were marked Α to Κ (Σ being omitted), and ὄρος Κ = the 10th boundary-stone. A familiar example of this use of the later alphabet is seen in the num-

bering of the books of the *Iliad* and *Odyssey*. This system, however, could only be of limited application, since it did not provide for any numbers beyond 24. The system usually found in Greek mss. and classical texts uses 27 signs—the complete Ionic alphabet, including the obsolete signs Ϝ or Ϛ, Ϙ or ϙ, and Ϟ or ϟ (see table on p. 690); these fall into three complete and equal categories, α — θ representing units, ι — ζ tens, and ρ — ϑ hundreds. It may be inferred from the presence of these three obsolete symbols that the system must have been invented at least as early as the sixth century B.C. in Miletus; but the earliest epigraphic evidence for its use is found in the fourth century B.C., on alabaster vases from the Mausoleum at Halicarnassus, e.g. $\Psi\text{N}\Delta = 754$, $\Sigma\text{Q}\Gamma = 293$. In Athens the usage does not occur until the first century B.C. The thousands are distinguished by a diacritical sign on the left, which in unambiguous cases may be omitted; thus $\text{'}\Delta$ or $\text{'}\Lambda = 1000$. Fractions are represented by special symbols in the acrophonic system; other examples are too uncertain to call for notice here.

745. The grammatical constructions are as a rule simple and free from intricacy. Where they depart from rule there is hardly anything which might not find its parallel in the literary language. Nor is this statement seriously qualified by the occurrence of such variations as $\epsilon\pi\alpha\iota\nu\acute{\epsilon}\iota\nu$ and $\epsilon\pi\iota\mu\epsilon\lambda\epsilon\acute{\iota}\sigma\theta\alpha\iota$ followed by the dative in Attic inscriptions, by the use of $\acute{\epsilon}\nu$ with the accusative in Delphian, the use of $\xi\xi$ with the dative in Arcadian and Cyprian, or the use in Elean of the optative with $\kappa\alpha$ and of the subjunctive in an imperatival sense ($\kappa' \acute{\epsilon}\alpha = \acute{\alpha}\nu \acute{\epsilon}\iota\eta$ for $\acute{\epsilon}\sigma\tau\omega$, $\acute{\alpha}\nu\alpha\tau\epsilon\theta\acute{\alpha} = \acute{\alpha}\nu\alpha\tau\epsilon\theta\acute{\eta}$ for $\acute{\alpha}\nu\alpha\tau\acute{\epsilon}\theta\eta\tau\epsilon$). In the non-Attic dialects in fact there is nothing, in the absence of contemporary literary documents, to show that the syntax of the inscriptions is not that of the corresponding spoken and written dialect.

Syntax of
inscriptional
language.

746. Inscriptions are (1) dated, (2) undated. In dated inscriptions the date of origin or engraving is expressly mentioned in formulae varying with the political circumstances of the Grecian States. As a general rule every independent canton or State dated its public documents according to the term of office of its highest political or State officials; as e.g. at Athens by the mention of the eponymous Archon, at Gortyn of the eponymous $\text{K}\acute{\omicron}\sigma\mu\omicron\varsigma$, in Aetolia by the name of the $\Sigma\tau\text{ρα}\tau\eta\gamma\acute{\gamma}\omicron\varsigma$ and so forth. In some cases we have a continuous list of such officials, as of Attic Archons from 480 to 291 B.C. The date within this period, when the Archon's name in an inscription survives, is immediately determinable, except where there happen to be two Archons of the same name. Inscriptions dated by the reign of a King do not always give the exact year of the reign. The oldest inscriptions in which the year of the reign is specified are those of Mylasa. In the case of Roman Emperors the date may be inferred (1) from the *tribunicia potestas*, (2) the number of the consulate, (3) the abdication. The reckoning

Determina-
tion of date.

by Olympiads (from 776 B.C. to Ol. 294 = A.D. 400), common in the historians, is rarely found in inscriptions. Occasionally in votive offerings Olympian victors give the number of the Olympiad in which they won. In the Hellenistic and Roman periods we find a large number of local eras, known for the most part only by coin-inscriptions. Nearly all of these eras belong to Asia Minor. Their starting-point is the grant of autonomy, incorporation in the Roman Empire, organisation as a Roman Colony, the visit of an Emperor, etc. Some eras have reference to events of general history, others to occurrences in the local history of individual towns, especially the institution of games or festivals. The reckoning by Indictions or taxation-periods of 15 years which is found in Oriental inscriptions begins with 1 September 5509 dating from the Byzantine era of the creation = A.D. 313. But for exact chronological purposes it is of little use, because only the year and not the period of the Indiction is given. The Christian era is almost unknown to the Byzantines. In the few inscriptions in which it is found (C.I.G. 8689, 8759) it appears as an addition to the Byzantine date.

In undated inscriptions the date is determined (1) by the various contents of the documents, as, *e.g.*, the names of historically known persons; (2) by the dialectic forms, *e.g.*, the presence or absence in Attic of the older dative plural of *a*-stems in -σι (ταμίᾱσι), the use or disuse of patronymic adjectives in Boeotian, as Ἀμνίας Τιμώνιος for Τίμωνος; (3) by official formulae, which were subject to change from time to time: *e.g.*, in Attic decrees the name of the ἄρχων ἐπώνυμος appears for the first time in 433 B.C.; in and after 349 B.C. the name of the proposer is followed by that of his father and his deme; (4) by the written character: *e.g.* the use or disuse of the βουστροφηδόν style, the use of an epichoric or of the Ionic alphabet, the use or disuse in Attic of ζ, of ο for ου (after about 353 B.C.), of ε for ει (after about 276 B.C.), the use of ligatured letters, the use of Ζ, Θ, Μ, Π, Σ, Ω for the older Ι, Ο, Μ, Γ, Ξ, Ω; (5) by the form and architectural character of the stones themselves, sculptures in relief, the form and artistic style of inscribed vases, etc.; lastly (6) by the peculiar circumstances of the place of discovery, as the depth of the strata of earth at Naucratis.

747. **Decrees.** The Attic documentary style supplied the pattern to a large number of the other Greek States. A typical Attic

Classification
and formulae
of inscrip-
tions.

decree from about the middle of the fifth century to 376 B.C. would contain the following elements: (A) The preamble.

This consists of (a) the introductory formula: ἔδοξε τῇ βουλῇ καὶ τῷ δήμῳ (or τῇ β. or τῷ δ. alone); (b) the name of the 'prytanising' tribe: Κεκροπίς (Ἐρεχθίδης, etc.) ἐπρυτάνευσεν; (c) the name of the Secretary of the Tribe: Μνησίθεος ἐγραμμάτευεν; (d) the name of the President of the Ecclesia: Εὐπείθης ἐπεστάτει; (e) the name of the eponymous archon (frequently omitted): δ δείνα ἦρχεν; (f) the name of the proposer: Καλλίας εἶπεν. After 375 B.C., gradually, more specification in the names and more exactness in the dating were introduced. The character of the assembly and the place (ἐκκλησία ἐν—, βουλή ἐν—)

and the nature of the decree (δήμου ψήφισμα, βουλῆς ψ.) might be noted. Cf. for the preamble, I.G. II. 1, 247, a decree of 306/5 B.C.: Θεοί. | Ἐπὶ Κοροΐβου ἄρχοντος ἐπὶ τῆς Οἰνείδος δεκάτης πρυτανείας [οἱ πρυτανευούσης], εἰ (= ἦ) Πάμφιλος Θεογαίτονος Ῥαμνούσιος ἐγραμμάτευεν. | Μουνυχιῶνος ἐνεῖ (= ἐνη) καὶ νέα ἐμβολίμω, ἐνάτει (= -η) καὶ εἰκοστῆι (= -ῆ) τῆς πρυτανείας· ἐκκλησία· | τῶν προέδρων ἐπειψήφισεν Πύθιππος Πυθίωνος Μαραθώνιο[ς] καὶ συμπρόεδροι· ἔδοξεν τῷ δήμῳ· Στρατοκλῆς Εὐθυδήμου Διομμεὺς εἶπεν· ἐπειδὴ κτλ. Note that formula (ε) is replaced by a heading with the name of the archon, the prytanising tribe (δ) has its numerical order specified; formula (δ) gives way to the phrase τῶν προέδρων κτλ. and marks the transference of the ἐπιψήφισις from the epistates of the prytanes to a chief, elected by lot, of the nine πρόεδροι or representatives, one from each 'non-prytanising' tribe. Further, the day of the month (in this case an intercalary day, ἐμβόλιμος) and the day of the prytany are specified. Lastly, this inscription belongs to the period dating from 307/6 B.C., when the two new tribes, Antigonis and Demetrias, were added to the existing ten, and the duration of prytanies, increased from ten to twelve, *approximately* coincided with the limits of the several months. After the statement of (B) motives, introduced by ἐπειδὴ, there follows, between the preamble and the substance of the measure or law, (C) the transition-formula: (τύχη ἀγαθῆ) δεδόχθαι (rarely ἐψηφίσθαι) τῇ βουλῇ or τῷ δήμῳ. This in a large number of decrees was *probouleumatic*, i.e., marks the decree as having been drafted and approved by the Senate before being submitted to the Ecclesia, and then (D) the actual words of the proposition or decree or bill or treaty in the infinitive construction. Amendments (E) or appendices proposed by the Ecclesia are introduced as follows: ὁ δεῖνα εἶπε· τὰ μὲν ἄλλα καθάπερ τῇ βουλῇ (sc. ἔδοξεν) or καθάπερ Ἀντικλῆς (sc. εἶπεν) τὰς δὲ εὐθύνας Χαλκιδεῦσι κατὰ σφῶν αὐτῶν εἶναι ἐν Χαλκίδι κτλ. Lastly (F) follow directions concerning the engraving, choice of material, grant of costs, the boards, officials or fund upon which the payment devolved, the limit of cost and other provisions for publishing or executing copies of the document.

Honorary decrees, including decrees conferring the title of πρόξενος or εὐεργέτης, form a very large class of their own, and in no other department of Epigraphy does the influence of the Attic style make itself more widely felt than in the drafting of these honorary decrees. In the fifth century the framework was very simple; the introductory formula was immediately followed by the substance of the decree: ἐπαινεῖσαι τὸν δεῖνα, sometimes with the motive briefly added and an enumeration of the honours conferred. In later times, after the mention of the proposer, there followed (1) a statement of motive, introduced by ἐπειδὴ and tending to become more and more prolix and tedious; (2) a 'hortative' section, e.g. ὅπως ἂν οὖν καὶ οἱ ἄλλοι ἅπαντες εἰδώσιν ὅτι ὁ δῆμος ἐπίσταται χάριτας ἀποδιδόναι κτλ.; (3) the transition formula: δεδόχθαι κτλ.; (4) the expression of thanks and the grant of various privileges; e.g. προεδρία, ἀτέλεια, γῆς τε καὶ οἰκίας ἔγκτησις, ἀσυλία κατὰ γῆν καὶ κατὰ θάλατταν, etc.

748. In form there is frequently not much difference between the inscriptions known respectively as **Honorary, Dedicatory and Sepulchral**, and it is not always possible to decide to which category an inscription belongs. The simple nominative is found on the statue-bases of distinguished men in the earlier time, e.g. Δουκῶργος ὁ ῥήτωρ; in dedications, as Ἡγεμῶν ἀρχηγέτης, to whom the dedication was made; and on tombstones the name of the deceased, as Κλεῖτος; after Euclides, with the name of the deme added, as Βλέπιος Ἀθμονεύς; or the father's name as well, e.g. Φίλων Καλλίππου Αἰξωνεύς. Or the name may be in the genitive, as Ἡρώδου τοῦ Ἀττικοῦ—Ἀπόλλωνος Ἀγυιεύς Προστατηρίου—Ἀριστίωνος; or the dative, as θεῶ Σεβαστῶ—Ἀθηνῆ Πολιάδι; or the accusative, as Τιβέριον θεόν (*honorary*); the vocative as: Μόσχε Μόσχου, χαῖρε (*sepulchral*). Expansions may be as follows: Ἡ πόλις Μάρκω Οὐλίπῳ Εὐβιώτῳ (*hon.*)—Δήμητρι καὶ Κόρη Φάβιος Δαδοῦχος (*ded.*)—Ἡ μήτηρ τῇ θυγατρὶ (*sep.*); the datives depend upon ἀνέθηκε, ἀνέστησε, ἐποίησε or the like, either expressed or understood. Sometimes the motive is added, e.g. (*hon.* or *ded.*) ἀρετῆς ἔνεκα—εὐχῆς χάριν—γυμνασιαρχήσαντα; μνείας or μνήμης χάριν (*sep.*). The source of expenditure may be specified, as ἐκ τῶν ἰδίων προσόδων; or the authorisation, as ψηφισαμένης τῆς πόλεως καὶ τοῦ δήμου; or the executive, as ἐπιμελουμένης τῆς Ἐρεχθίδος φυλῆς; or the date may be given, as ἐπὶ τοῦ δεῖνος ἄρχοντος. In tomb-inscriptions the age of the deceased may be mentioned, e.g. βίωσας ἑτη δεκατρία; or the manner of death, as: Λοιμῶ θανούσης, or a consolatory remark added, as εὐψύχει· οὐδεὶς ἀθάνατος. Sometimes tombstones were erected during lifetime; hence the addition (in the imperial period), ζῆ, ζῶσι. Tomb inscriptions are often written in verse, from the sixth century B.C. onward; in later times they are more elaborate. Sepulchral monuments might be commended to the protection of the community or the gods: τούτου τοῦ μνημείου ἡ γερουσία κήδεται—παραδίδωμι τοῖς καταχθονίοις θεοῖς τὸ ἥρῳον φυλάσσειν. More or less elaborate curses might be impetrated on desecrating persons: κακῶς τε ἀπολέσθαι αὐτοὺς καὶ γένος. Akin to these are curses (*devotiones*) inscribed for the most part on leaden plates, e.g. ἀνατίθημι Δάματρι κτλ....τοὺς ἐπ' ἐμὲ ἐλθόντας καὶ μαστιγώσαντας κτλ....μη ἐξάλυξαιεν.

749. Property might be indicated by the simple genitive, as—Πανός—Ἀπόλλωνος πατριῶν. On an epistyle we find ἐπεσκευάσθη ἐκ τῶν δημοσίων χρημάτων, ἐπιτροπεύοντος Αἰλίου Ὀμούλλου. Inscriptions in prose and poetry giving the name of the artist or sculptor of a statue or other work exhibit a great variety of style; the most common is that represented by, e.g., Κρησίλας ἐποίησε, Ἀριστίων μ' ἐποίησεν, Πυθαγόρας Σάμιος ἐποίησεν. More than 500 such inscriptions have been collected containing the names of a large number of sculptors, many of them not otherwise known, and of various nationalities.

Honorary,
Dedicatory
and Sepulchral
Inscriptions.

Inscriptions
on Property or
Buildings.
Names of
Artists.

750. The **Ephebic** inscriptions form a distinct category in Athens, ranging from the third century B.C. to the third century A.D. They consist, with a varying measure of complexity, (1) of decrees laudatory of the Ephebi (youths between eighteen and twenty years of age, who were entered on the *ληξιαρχικὸν γραμματεῖον* or register of the deme and were undergoing military training), and one or more of their numerous officers and trainers (*παιδοτρίβης, ὀπλόμαχος, ἀκοντιστής, τοξότης, ἀφέτης, γραμματεὺς, ὑπηρέτης*), (2) of lists of Ephebi, (3) decrees in honour of Ephebi alone.

Ephebic
inscriptions.

751. As a type of **Public Accounts** may be taken inscriptions recording the transference of the treasure in the Pronaos of Athena from one set of treasurers to their successors. The transactions covered a *penaeteris*, or period of four annual magistracies (*ἀρχαί*). The preamble ran thus: *Τάδε παρέδοσαν αἱ τέτταρες ἀρχαί, αἱ ἐδίδονσαν τὸν λόγον ἐκ Παναθηναίων ἐς Παναθήναια, τοῖς ταμίαισιν (= ταμίαις), οἷς ὁ δεῖνα ἐγραμμάτενε. οἱ δὲ ταμίαι, οἷς ὁ δεῖνα ἐγραμμάτενε, παρέδοσαν τοῖς ταμίαισιν, οἷς ὁ δεῖνα ἐγραμμάτενε. Ἐν τῷ Προνηίῳ (here follows the inventory of treasures). Ἐπέτεια (additions during the year) ἐπεγένετο ἐπὶ τῶν ταμιῶν, οἷς ὁ δεῖνα ἐγραμμάτενε (here follows the inventory).* The transactions of the second, third and fourth years were similarly described. Under this head the long temple accounts of Delos are the completest of their kind. We have also a long series of documents which give the details of the property handed over by the Overseers of the Dockyards (*ἐπιμεληταὶ τῶν νεωρίων*) to their successors. Types of formulae are: *Τάδε παρελάβομεν καὶ ἀπελάβομεν σκευή κρεμαστὰ ἐν νεωρίοις—Σύμπαν κεφάλαιον ἀργυρίου οὗ εἰσεπράξαμεν καὶ κατεβάλομεν ἀποδέκταις (here follows the sum)—Οἶδε τῶν τριηράρχων τῶν ὁμολογησάντων ἐν τῷ δικαστηρίῳ καινὰς ἀποδώσειν τριήρεις καὶ τοὺς ἐμβόλους ὀφείλουσι τεῖ πόλει, τὰς δὲ ἀποδεδώκασιν (here follow names).* An inscription containing an architect's specification for the erection of the 'Arsenal of Philo' in the Peiraeus enables us to restore almost stone for stone a building of which not a vestige remains.

Annual
Accounts of
Magistrates,
etc.

From the **Tribute Lists** we learn the long array of States which were subject to Athens in the latter half of the fifth century B.C. The amount of the tribute paid by each is arrived at by multiplying by 60 the percentage (*μνᾶ ἀπὸ ταλάντου*) paid as *ἀπαρχαί* to Athena. After the introductory clauses—*Αἶδε τῶν πόλεων τῶν παρὰ τῶν Ἑλληνοταμιῶν, οἷς ὁ δεῖνα ἐγραμμάτενε, ὑπὸ τῶν τριάκοντα ἀπεφάνθησαν ἀπαρχαί τῇ θεῷ ἐπὶ τοῦ δεῖνος ἀρχοντος*—comes the list of States arranged under the categories *Ἴωνικός φόρος, Ἑλλησπόντιος φόρος* etc., with subsections such as—*Πόλεις αὐτὰι φόρον ταξάμεναι—Πόλεις ἃς οἱ ἰδιῶται ἔταξαν.*

A **Subscription List** might be headed thus: *Οἶδε ἐπέδωκαν εἰς τὴν ἐπισκευὴν τοῦ ἱεροῦ καὶ κατασκευὴν...κατὰ τὸ ψήφισμα ὃ ὁ δεῖνα εἶπεν.* Lists of soldiers on service (chiefly from Boeotia) might begin: *τυὶ (= τοῖ) πρᾶτον ἐστροτεύαθη (= ἐστρατεύνται),* followed by the names. In a list of the fallen in battle,

Official
name-lists.

461—460 B.C. the names are preceded by the heading: Ἐρεχθίδος οἶδε ἐν τῷ πολέμῳ ἀπέθανον ἐν Κύπρῳ, ἐν Αἰγύπτῳ κτλ... τοῦ αὐτοῦ ἐνιαυτοῦ. A very large category is that of the Choragic and Agonistic inscriptions or lists of victors in contests. A common formula is, e.g., Αἰγηῆς ἀνδρῶν ἐνίκᾳ, Εὐαγίδης Κτησίου Φιλαίδης ἐχορήγει, | Λυσιμαχίδης Ἐπιδάμνιος ἤλει, Χαρίλαος Λοκρὸς ἐδίδασκε, | Εὐθύκριτος ἤρχε.

752. It is more difficult to classify according to their formulae legal documents, such as Leases, Contracts, Deeds of Sale, State Loans, Donations, Deeds of Manumission, etc. Examples are: (1) τὴν γῆν τὴν ἐν Δήλῳ τὴν ἱερὰν ἐμίσθωσαν καὶ τοὺς κήπους κτλ. (*Amphictyons in Delos*); (2) Ἀγαθὴ τύχη· ἐπρίατο Θειογείτων..., χρυσῶν τριακοσίων. Βεβαιωτῆς..., μάρτυρες... (*Amphipolis*); (3) τοὶ πολέμαρχοι... ἀνέγραψαν καθὼς ἐποίησανθο τὰν ἀπόδοσιν τῷ δανείῳ τῶν Νικαρέτας κατ τὸ ψάφισμα τῷ δάμῳ (*Orchomenus*); (4) Θεός, τύχα· Σάωτις δίδωτι Σικανία τὰν φοικίαν καὶ τᾶλλα πάντα· δαμιοργὸς..., πρόξενοι... (*Petilia*); (5) ἐπρίατο ὁ Ἀπόλλων ὁ Πύθιος παρὰ Σωσιβίου Ἀμφίσσεος ἐπ' ἐλευθερία σῶμα γυναικεῖον, ᾧ ὄνομα Νικαία κτλ. (*Delphi*: an act of sale to the deity which was equivalent to a manumission of the person sold).

From Gortyn, in Crete, we have a twelve-column-long βουστροφηδόν inscription (see §§ 475 ff.: for a specimen of the text see Fig. 177) containing provisions of private law relating to slavery, divorce, property, inheritance, adoption, and other topics; and fragments of inscriptions of a more archaic type apparently anterior to the use of coined money, the calculations of value being made in λέβητες (see Fig. 175), and τρίποδες.

Inscriptions on boundary stones are of various types, e.g. Ὀρος Λακεδαίμονι πρὸς Μεσσήνην—Δεῦρε Παιανιῶν τριττὸς τελευτᾶ, ἄρχεται δὲ Μυρρινουσίῳν τριττὺς. A peculiar category is formed by stones marking property and inscribed with the terms of a mortgage or a dowry: Ὀρος χωρίου πεπραμένου ἐπὶ λύσει τῷ δεῖνι—Ὀρος οἰκίας ἐν προικὶ ἀποτετιμημένης τῷ δεῖνι.

Corpus inscriptionum Graecarum (C.I.G.), 1828–77. *Inscriptiones Graecae* (I.G.), vols. I—XIV. (some volumes not yet completed); viz. I—III. (C.I.A.) *Atticae*, IV. *Argolidis*, V. *Arcadiae, Laconicae, Messeniae*, VI. *Elidis et Achaiae*, VII. *Megaridos et Boeotiae*, VIII. *Delphorum*, IX. *Graeciae Septentrionalis*, X. *Epiri Macedoniae*, XI. *Deli*, XII. *Insularum Maris Aegaei*, XIII. *Cretae*, XIV. *Siciliae et Italiae &c.* *Inscriptiones Graecae antiquissimae* (not Attic), Roehl. *Greek Inscriptions in the British Museum*, Newton and Hicks.

Selections and Manuals. Cauer, *Delectus inscr. graec. propter dialectum memorabilium*, ed.²; Solmsen, *Inscr. graecae ad illustr. dialectos selectae*; Hicks and Hill, *Greek Historical Inscriptions*; Dittenberger, *Sylloge inscr. graecarum and Orientis graeci inscr. selectae*; Collitz, *Sammlung der griech. Dialekt-Inscripfen*; Kirchhoff, *Studien z. Gesch. des griechischen Alphabets*, ed.⁴ 1887; Roberts, *Introduction to Greek Epigraphy*, Pt. I. and (with E. A. Gardner) Pt. II.; Reinach, *Traité d'Épigr. grecque* (incorporating Newton's articles on Gr. inscr.), 1885; Larfeld, *Griech. Epigraphik and Hdbch. d. gr. Epigr.*;

Meisterhans, *Gramm. d. att. Inschriften*, ed.³ 1900; Michel, *Recueil d'Inscriptions grecques*. There are also numerous collections of inscriptions selected with reference to special subject-matter; e.g. Dareste, *Inscriptions Grecques juridiques*; Loewy, *Inschriften gr. Bildhauer*, and a rapidly increasing series of local collections, e.g. of Cos, Boeotia, Crete, the coast of the Euxine; also the official publications of the inscriptions from excavations, such as Olympia, Pergamon, Delos, Delphi, etc. For epitaphs, Kaibel, *Epigrammata Graeca, ex lapidibus collecta*. For numeral systems, Tod, *Ann. British School at Athens*, xviii. 1911-12, pp. 98-132.

VIII. 3. PALAEOGRAPHY.

753. PALAEOGRAPHY seeks to read, date and place writings in ink on papyrus, parchment or paper, occasionally on sherds or wax. Definition. Epigraphy deals with inscriptions upon stone or metal. The distinction is less superficial than it looks. The forms of written letters, similar at first to those of inscriptions, developed more swiftly and with few exceptions the difference is maintained until the Byzantine engravers of inscriptions took to imitating the work of scribes. The subject-matter also of written documents except a few legal papyri receives little direct illumination from inscriptions.

754. Changes in writing are mainly produced by laziness; in his desire to save trouble the scribe slurs over the forms of letters so that they tend to resemble each other, or runs them together so that it is hard to distinguish them or employs abbreviations themselves subject to degradation. Changes in writing: book and cursive hands. This tendency is counteracted by the reader's demand for clearness, generally met by reverting to an older type of script, sometimes by differentiating similar letters through an exaggeration of their characteristic features. A third element, the desire for the writing to look beautiful, on the whole makes for clearness except when it produces excessive uniformity, the scribe as it were forcing all the letters into one mould so that they should not spoil the regularity of his line or page.

These three forces differ in relative strength with the contents or purpose of the writing. In rough copies or documents of ephemeral interest, receipts and the like, the writer goes as fast as he can, often too in deeds with their regular formulae which he is tired of repeating. In such hands the forms of letters change in every generation, whereas in books much more concern for legibility is shown and the changes are extremely slow. Among running or cursive hands some are those of ordinary citizens, others those of legal scribes, others the styles elaborated in government

offices and written perhaps as carefully in their way as the book-hands. So the books may be in absolutely cursive hands when a work has been copied out by an amateur perhaps for his own use; usually we find them transcribed in hands which, however difficult to us through bad preservation or our want of familiarity with their peculiarities, were as plain as print to cotemporaries and generally aim at a pleasant appearance; while at any rate from the first century A.D. we have magnificent scripts written with the very highest skill. It looks as if these ornamental styles were in earlier times reserved for Homer, afterwards mainly for bibles or liturgical books.

755. Different materials encourage different sorts of pen-stroke in

Influence of
Material.

the quick writer and set different artistic ideals before the calligrapher. On stone letters tend to be separately made up of independent strokes or scratches of the chisel with few curves and are generally irregular; while the pen makes curves and joins independent strokes and even letters together and in time there comes a feeling for uniformity of height. In the Timotheus papyrus (Fig. 187, *c.* 330 B.C.) the irregular epigraphic forms have not succumbed to the soft material, and the books of the third century have not yet settled down to the typical papyrus hand, yet fourth century cursive must certainly have grown out of any such awkwardness, for a long development lies behind such a hand as Fig. 188 (255 B.C.).

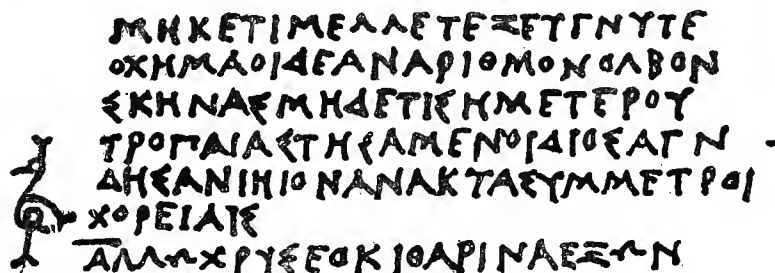
Papyrus with its tender surface and thin substance encouraged a light quick stroke though a heavier style was not impossible. This heavier manner became general when about the fourth century A.D. scribes took to parchment and in time realized its possibilities, for it is often difficult to make very fine lines upon it, while it shows up thick strokes to perfection. The adoption of paper had little effect upon the forms of letters except that the cheaper material tempted scribes to use less care upon it.

756. In outline the story of Greek writing is simple and this simplicity makes it hard to date specimens of any but a

Uncial and
Minuscule.

few varieties. From the fourth century B.C. till the eighth or ninth A.D. the book-hand changes very slowly and often harks back to earlier styles. The letters are *majuscules*, *i.e.* capitals nearly all contained between two parallel horizontal lines with only one or two projecting above or below; almost from the beginning the rounded Ε, Γ, Ω had superseded the angular Ε, Σ, Ω so this hand is usually called *uncial* upon the analogy of a Latin majuscule hand in which several of the letters have rounded forms. Parallel with this runs the cursive; we can trace most of its continuous development though its changes are very rapid and its varieties innumerable, only the earliest and latest could be given here (Figs. 188, 192): from about the fourth century A.D. some letters become distinguishable by growing tall or developing tails: this classes it as a *minuscule* hand in which the bodies of the letters are between two lines but parts of them may project more or less to reach other two lines above and below. When in the eighth or ninth century the uncials had

become too thick and clumsy, varieties of the cursive regularized and applied to the writing of vellum books superseded the uncials. About the same time materials for following the course of the everyday writing fail us and until the Renaissance we have but the minuscule book-hand.



μηκετι μελλετε ζευγνυτε — —
 οχημα οι δε αναριθμον ολβον — —
 σκηνας μηδε τις ημετερου — —
 τροπαια στησαμενοι Διος αγν[ισατον] — — — εκελα-
 δησαν ιηιον ανακτα ευμμετροι — —
 χορειαις
 αλλ ω χρυσεκιθαρων αεξων.

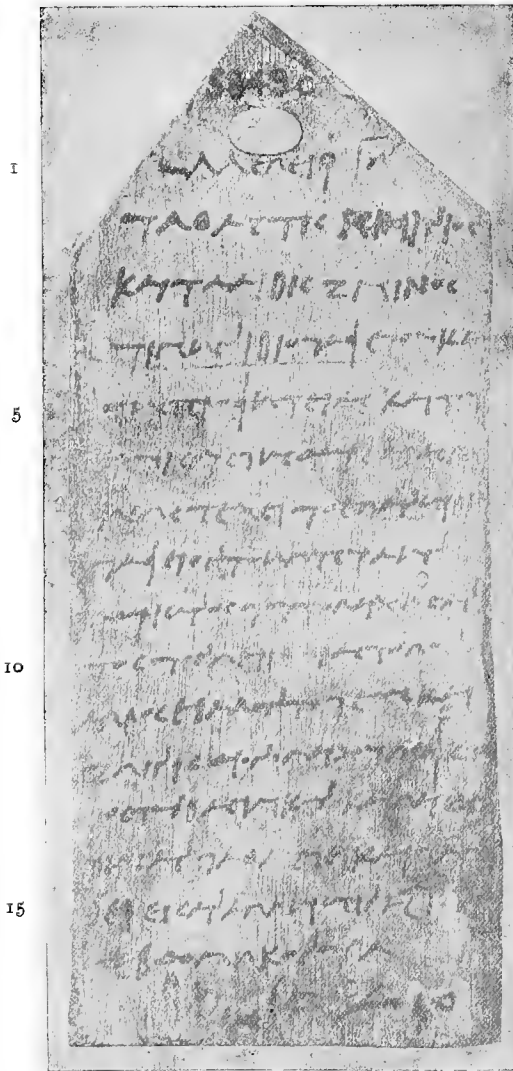
Fig. 187. Timotheus of Miletus, *Persae*, late fourth cent. B.C. *New Pal. Soc.* 22. Slightly reduced. About half each line is shown¹.

757. Fig. 187 shows a book-hand still very like an inscription, note the A with horizontal stroke, B with a big head, square E, small I Θ Ξ and O, the epigraphic I and Σ, and Ω on its way to the Ω form. The writing is in very long uneven lines and the columns trend away to the left: it may not be the work of a professional. The bird is a glorified *coronis* marking with a *paragraphos* the beginning of the *sphragis* or *coda* of the *nomos*. Book-hands in the third century show the same characteristics in a less degree. Meanwhile the cursive had by 255 B.C. reached the state shown on Fig. 188. Note the forms assumed by α, β, δ, η, λ, μ, ν, τ, υ, φ and ω: the result is an almost continuous line along the top of the writing above which only ν and φ project. This line is characteristic of the Ptolemaic period.

Ptolemaic
Writing.

The same sort of feeling comes out in the Ptolemaic book-hand, especially in broad hands with angular letters such as the Bacchylides ms. (Fig. 189), note the shallow topped μ and ν; Ξ too is made in three separate strokes, but it must be allowed that very similar hands went on until the

¹ This and the following transcriptions make the facsimiles intelligible by modernizing the letters, dividing the words, supplying hyphens and capitals and resolving abbreviations, but in punctuation, accentuation etc. they reproduce their originals.



1 (ετους) λα επειφ Ἰη

Ταθαντις Ζιμιος

και Τααιβις Ζιμιος

τιμην ιβιοταφειου και

5 της προφητειας και του

ημισους της δωριαιας γης

ης μετεχει το επανω ιβιο-

ταφειου το ημισυ δ ην

Δωριωνος του τοπαρχησαν-

10 τος τον περι Θηβας τοπον

α προσεβαλοντο τews και

Ζιμις δι Ονομαρχου πρακτο-

ρος των βασιλικων και παρεκ-

βησαν Ταθαντει και Τααι-

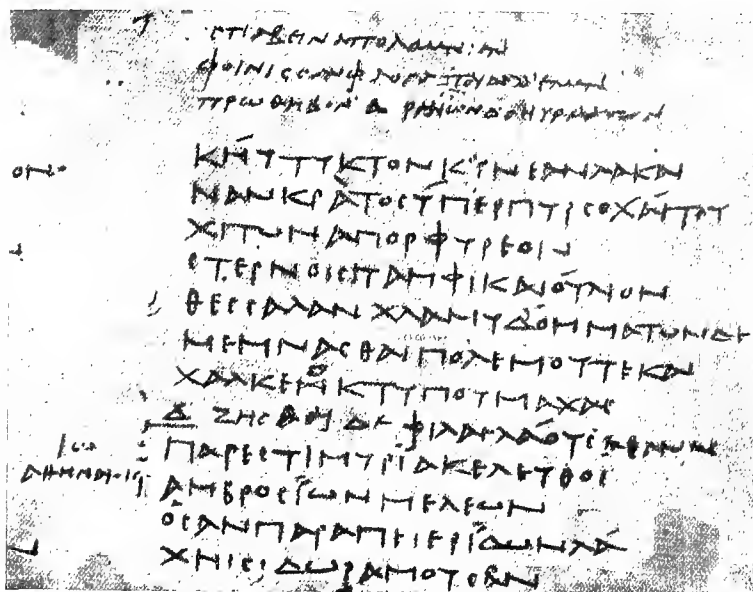
15 βει εις αναπληρωσιν † ξι

† εβδομηκοντα.

[Demotic line.]

Fig. 188. Wooden money-bill for 70 drachmas, half the price of burying an ibis, 255/4 B.C., *Pal. Soc.* II. 142. † = drachma; L is an Egyptian symbol for a year: επειφ is a month's name.

second century A.D. Parallel with it we find a rounded hand which foreshadows the commonest fashion in Roman times, e.g. the philosophical works recovered from a library at Herculaneum and usually put about 50 B.C.



55	7	στιλβειν απο Λαμνιαν φουισσαν φλογα· παιδα δ' εμεν πρωθηβον· αρηϊων δ' αυρματων
50		κητυκτον κυνεαν Λακαι- ναν κρατος υπερ πυρσοχαλτου· χιτωνα πορφυρεον στερνοισι τ αμφι και ουλιον θεσσαλαν χλαμυδ' ομματων δε μεμνασθαι πολεμου τε και χαλκεοκτυπου μαχας
60		δειησθαι δε φιλαελαους Αθανας
Ιω		παρεστι μυρια κελευθος
Αθηναιοισι		αμβροσιων μελεων ος αν παρα πειριδων λα- χησι δωρα μουσαν.

Fig. 189. Bacchylides (xvii. 50—xviii. 4), first cent. B.C. Note the three lines left out after l. 54 and written by a Roman hand (c. 100 A.D.) in the top margin; also the accents, breathing, *coronis* with *paraglyphos*, punctuation, diaeresis and short marks, v. Jebb, *Bacchylides*, Pl. I.

758. This roundness also appears in the Roman cursive marked also by certain peculiar shapes, e.g. of η (γ) and ε (Ϛ). In such a hand is written not only the usual letters and deeds but most of the 'Αθηναίων Πολιτεία. More books have survived from about 100 A.D. than from any other period and they show a great variety of style. There are a few scraps of mss. in which each letter was carefully made and a standard set up fit for the great vellum bibles: also a fashion for sloping writing, formerly supposed to mark quite a late date, had come in, and the rather archaic broad straight-lined style had not quite gone out; meanwhile the commonest was the rounded book-hand. As these four styles ran parallel for about three centuries it is not in the obvious differences that we are to seek criteria for dating but in occasional cursive forms that a copyist has allowed to creep in when off his guard, or in an indefinable similarity of stroke that the trained eye sees in the work

ΠΛΕΥΡΑΙΩΝ ΕΚΑ	πλευραιων εκα-
ΣΤΗ ΕΣΤΙΝ ΠΕΝΤΕ	στη εστιν πεντε
ΤΕΤΡΑΚΙΤΑ ΠΕΝΤΕ	τετρακι τα πεντε ει-
ΚΟΣΙ ΚΑΙ ΛΟΙΠΟΝ Α	κοσι και λοιπον α-
ΕΙ ΠΡΟΙΟΝΤΙ ΤΟ ΕΜ	ει προιοντι το εμ-
ΒΑΔΟΝ ΜΕΙΖΟΝΤΗΣ	βαδον μειζον της
ΠΕΡΙΜΕΤΡΟΥ	περιμετρου
ἩΜΕΙΝΟΥΝ ΕΙΣ ΗΛ	ἡμ[ε]ιν ουν εισηλ-
ΘΕ ΤΙ ΤΟΙΟΥΤΟΝ ΕΠΕΙ	θε τι τοιουτον επει

Fig. 190. Commentary on the *Theaetetus*, second cent. A.D. Schubart, *Pap. Gr. Berol.* 31.

of each age whether in the cursive or the book-hand: but this is very subjective and the more formal the hand the less there is to go by. To the second century A.D. are referred the earliest vellum books, though we have documents on skins going back to 88 B.C. The example of a good rounded hand in which the letters are made very freely and skilfully is from perhaps the most handsome roll extant; though mutilated it is 20 ft. long and 1 ft. wide; the columns, 8 in. high, leave $1\frac{1}{2}$ in. margin above and $2\frac{1}{2}$ in. below and have only about 17 letters in the line: note the *paragraphos* and the > used as quotation marks on the left and to fill up lines on the right (Fig. 190).

In the fourth century the cursive hand assumes what has been called the Byzantine form, that is to say it gets a look suggesting the Greek writing to which we are accustomed; it is often written with a mannerism aiming at decorativeness or dignity.

In the fourth or fifth century we may place the victory of vellum and of the book over the roll. The supersession of papyrus was not instantaneous; we have parts of mss., sometimes in book form, for another four hundred years (one or two, *e.g.* fragments of Menander, are of importance), and documents as late as 996 A.D., but it is likely that outside Egypt it gave way more quickly.

759. Our oldest great vellum book, the codex Vaticanus of the Bible, was probably written in the second half of the fourth century and the next, the codex Sinaiticus, about the year 400. The four columns to a page give it a roll-like effect but the writing is a little heavier than that of any but rather exceptional papyri. The *paragraphos* and short line of letters mark the end of what we call a paragraph, and further the first letter of the next encroaches a very little upon the margin: the Vaticanus offers less help to the reader and its writing is lighter, also it uses fewer contractions.

Vellum
Uncial.

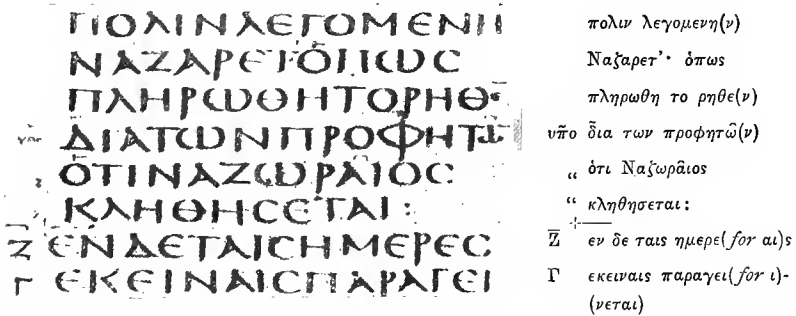


Fig. 191. Codex Sinaiticus, c. 400 A.D. Note the stroke for ν and the diminished letters at the ends of lines, the apostrophe to mark the unusual ending of *Ναζαρετ*, the reading *νπο* for *δια* in the margin, the quotation marks and the misspellings. Ζ and Γ are numbers of sections.

From the fourth to the ninth century vellum uncial was the chief vehicle of literature, but classical mss. are few; scribes were busy upon theology and law. The vertical strokes became thicker and in Ρ, Υ, Φ and Ψ longer while the horizontal or sloping strokes of Γ, Δ, Ε, Ζ, Κ, Π, C and Τ acquire heavy dots or serifs at their ends: codex Alexandrinus of the Bible shows a tendency in this direction and is put in the fifth century, as the great example of this style, a Dioscorides at Vienna, can be set about 513 A.D. A belated specimen, the earliest Greek ms. dated in its subscription, is of 800 A.D. The sixth century seems the age of gospels written in very big letters with gold and silver ink upon purple vellum. Less ambitious books were often in sloping uncials and in the ninth century this slope became fashionable even for large writing: we have such a ms. actually dated

862 A.D. and one or two must be earlier, while there are several in the tenth century. The slope and height of the letters tended to narrow them and the curves in Ε, Ο, C, Φ, Ω become pointed: the uncials on Fig. 193 are not tall enough to show this well, those on Fig. 194 exhibit a vertical form often used for headings and marginalia. Breathings and accents are first universally applied in the ninth century mss. whether uncial or minuscule. Towards the end of the tenth century upright uncials come in again and after the eleventh the letters recover their broad or round forms, but by this time the style has become very artificial and is reserved for liturgical books.

760. By the eighth century the uncial had become too magnificent or too clumsy for ordinary use and efforts were made, as it seems independently one of another, to adapt for books the cursive of ordinary life. Fig. 192 shows what this had reached by 605 A.D.; later specimens are too full of abbreviations to be generally intelligible.

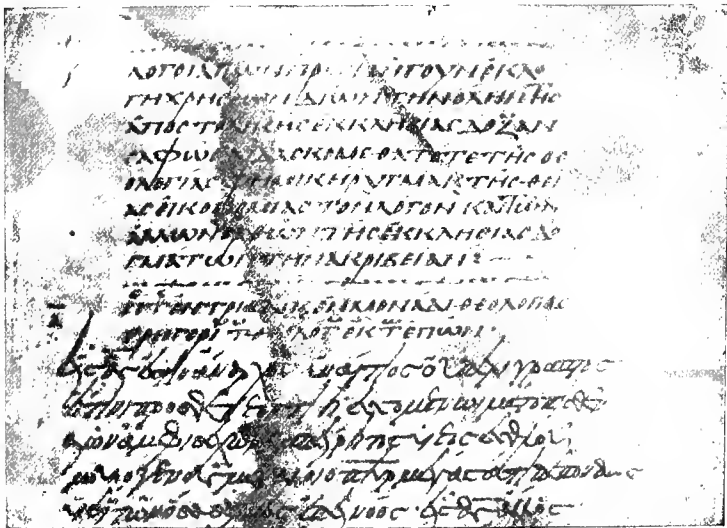
Adaptation of
cursive to
books.

της πολεις χ(αιρειν)· ομολογω εκουσια γνωμη συν-
τεθεισθαι με προς σε ως ει οιωδηποτε
καιρω ζητησω αποβαλεσθαι σε εκ του
υπο σε μενηματος διαφεροντος θεοδο(σακιου).

Fig. 192. Lease of a house, 605 A.D. Schubart, *Pap. Gr. Berol.* 47.

If we compare with this the minuscule on Fig. 193 we see that the shapes of α, β (not shown but like υ), ε, ει, η, ι, κ, λ, μ, σ, υ, φ are quite peculiar and very similar to each other: in other letters the specimen of cursive does not show the typical cursive forms.

The hand in Fig. 193 is an unsuccessful variant represented by only one or two mss. and these are very hard to date: logically they precede the ordinary minuscule, but the form of the uncial heading and the use of paper for this ms. makes it hard to put it earlier than the ninth century. The text is very troublesome to read and the slope is ugly: besides the forms noticed above observe γ, θ, ν: the last, though so familiar to us, we shall not meet again until the fourteenth century.



.....
 ΛΟΓΟΙ ΔΓΙΩΝ Π(ΑΤΕ)ΡΩΝ ΗΓΟΥΝ ΕΚΛΟ-
 ΓΗ ΧΡΗΣΕΩΝ ΔΙ ΩΝ ΤΗΝ ὙΛΗΝ ΤΗΣ
 ΑΠΟΣΤΟΛΙΚΗΣ ΕΚΚΛΗΣΙΑΣ ΔΟΞΑΝ
 ΣΑΦΩΣ ΔΙΔΑΣΚΟΜΕΘΑ ΤΟ ΤΕ ΤΗΣ ΘΕ-
 ΟΛΟΓΙΑΣ ΦΗΜΙ ΚΗΡΥΓΜΑ Κ(ΑΙ) ΤΗΣ ΘΕΙ-
 ΑΣ ΟΙΚΟΝΟΜΙΑΣ ΤΩΝ ΛΟΓΩΝ ΚΑΙ ΤΩΝ
 ΔΛΛΩΝ ὈΡΘΩΝ ΤΗΣ ΕΚΚΛΗΣΙΑΣ ΔΟ-
 ΓΜΑΤΩΝ ΤΗΝ ΑΚΡΙΒΕΙΑΝ:—

πε(ρι) τ(ης) ἐν τριάδι κ(αι) ἐν μονόδι θεολογίας:—
 Γρηγορι(ου) τ(ου) θεολογ(ου) ἐκ τω(ν) ἐπὶ.

εἰς θ(εο)ς ἐστὶν ἀναρχος, ἀνάτιος ὃν περιγραπτὸς
 ἢ τινι προσθεν ἔοντι, ἢ ἔσσομενοι μετοπισθεν
 αἰῶν' ἀμφὶς ἔχων (καὶ) ἀπείρητος ἕως εσθλοῦ,
 μονογενοῦς μεγάλοιο π(α)τρὸς μέγας, ὃν τι πεπονθως
 ἕλει, τῶν ὄσα σαρκός, ἐπεὶ νόος· εἰς θ(εο)ς ἄλλος.

Fig. 193. Codex Vaticanus 2200. Theological verses, ninth cent. (?).

761. The successful variety of minuscule is much superior. It must go back to about 800 A.D. as the oldest dated example is of 835 A.D. We can follow continuously the changes in this hand until the seventeenth century. It is divided into three main periods, the older until about 975, the middle from then till about

Older
Minuscule.

1200 and the later coming down to about 1500 after which we need not descend.

In the ms. from which Fig. 194 is taken the gospels written in uncials are intermixed with a commentary in minuscules of the early style. All the letters except θ , χ and an alternative λ have their own forms far removed from the uncial: when once these are mastered and such ligatures as $\alpha\gamma$, $\epsilon\iota$, $\epsilon\sigma$, $\sigma\pi$, $\sigma\tau$, $\nu\eta$ and $\nu\sigma$ have become familiar, reading is very easy as there are but few abbreviations at any rate in the texts. The breathings are rectangular and with the accents put on most accurately. On MSS. in such a hand or in one not quite so elaborate the text of most classical authors mainly rests. The period is generally regarded as closing about 975 when scribes took to letting the letters hang from the ruled line instead of standing upon it. A little before this a sloping hand had come in not quite so formal as the upright but almost as well written.

<p>πῶν ἀγγέλων τῶν ἐπι ἐπι ἐπι ἀμαρτωλῶν μετανουθῶντι· πῆρῃ τῆσδραγμῆσφῆσῃ μὲ 5 αἰσὸν γρηγόριος ὁ θεολόγος ὁ ὑποσὸ ὅτι λύχνον ἤφεν ὁ χ(ρι)στος κ(α)ι 6 ὁ δὲ λεγόμενος τὴν ἐαυτοῦ σάρ κα καὶ τὴν οἰκίαν ἐσάρωσεν. τῆσ ἀμαρτίας τὸν κόσμον ἀ- ποκαθαίρων. καὶ τὴν δραγμῆ(ν) 10 ἐξήτησεν τὴν βασιλείην ἐέκο- να συγκεχωσμένην τοῖσ πά- θεσιν. καὶ συναλείεται τὰς φίλασ αὐτῶ δυνάμεισ ἐπι τῆ τῆσ δραγμῆσ ἐύρεση. καὶ 15 κοινωνοῦσ ποιέεται τῆσ εὐφρο- σύνησ ἄσ καὶ τῆσ οἰκονομίας μύσταδοσ πεποίηται·— Εἶπεν δὲ ἀν(θρῶπ)οσ τίς εἶχεν δῶγο ἴ- οῦσ· καὶ εἶπεν ὁ νεώτεροσ ἀγτῶ(ν) 20 τῶ π(ατ)ρι· π(ατ)ερ δόσ μοι τὸ ἐπιβαλ(λον)</p>	<p>τῶν ἀγγέλων τῶν θ(εο)γ ἐπι ἐπι ἀμαρτωλῶ μετανουθῶντι·— Περὶ τῆσ δραγ(φο)ρ χ(ρι)μῆσ φησὶν ὁ ἅγιος γρηγόριος ὁ θεολόγος ὅτι λύχνον ἤφεν ὁ χ(ρι)στος κ(α)ι θ(εο)σ. δηλονότι τὴν ἐαυτοῦ σάρ- κα καὶ τὴν οἰκίαν ἐσάρωσεν. τῆσ ἀμαρτίας τὸν κόσμον ἀ- ποκαθαίρων. καὶ τὴν δραγμῆ(ν) ἐξήτησεν τὴν βασιλείην ἐέκο- να συγκεχωσμένην τοῖσ πά- θεσιν. καὶ συναλείεται τὰς φίλασ αὐτῶ δυνάμεισ ἐπι τῆ τῆσ δραγμῆσ ἐύρεση. καὶ κοινωνοῦσ ποιέεται τῆσ εὐφρο- σύνησ ἄσ καὶ τῆσ οἰκονομίας μύσταδοσ πεποίηται·— Εἶπεν δὲ ἀν(θρῶπ)οσ τίς εἶχεν δῶγο ἴ- οῦσ· καὶ εἶπεν ὁ νεώτεροσ ἀγτῶ(ν) τῶ π(ατ)ρι· π(ατ)ερ δόσ μοι τὸ ἐπιβαλ(λον)</p>
--	--

Fig. 194. Cod. Monacensis (Cod. X. Evan.), c. 900 A.D. Notice many slips of spelling due to modern pronunciation.

762. In the middle period and henceforward the letters hang from the line, the breathings are not only square but rounded, especially the soft one, often too no clear distinction is made between them, and the abbreviations are much more frequent in the text. Also the uncial forms which seem to have been consciously avoided at first in the older style begin to find their way back in great numbers and new ligatures are devised. Further a slope is

Middle
Minuscule.

decidedly commoner and the letters are not formed with the same extreme care: and yet many MSS. of this period, especially gospels, are hard to distinguish from older work, the scribe only betraying himself at the ends of lines or at the bottoms of pages. This middle style shades off into the next and the limit must be arbitrary; 1204, the date of the fourth crusade disastrous to the Greek world, answers to a time when the change for the worse is very noticeable. Fig. 195 is a characteristic example of the eleventh century. The rough breathing is square but the soft rounded; there are many abbreviations, the uncial η, κ, λ, μ, ν, π, τ, φ, ω appear beside or instead of the cursive forms and a few more lines would probably yield α, β, γ, δ, ε, ζ and the like. It has also a slope, but the writing cannot be called careless.

οὐ γ(ὰρ) ὠφελήσει ὑμ(ῶν) ὁ π(ᾶς) χρόν(ος) τ(ῆς) πλῆστε(ς) ὑμῶν ἐὰν μὴ ἐν τῷ ἐσχάτῳ καιρ(ῷ) τελειωθῆτε· ἐν γὰρ τ(ῆς) ἐσχάτ(ης) ἡμέραις πληθυνθήσονται οἱ ψευδοπροφήται καὶ οἱ φθορεῖς· (καὶ) στραφήσονται τὰ πρόβατα εἰς λύκ(ους)· (καὶ) ἡ ἀγάπη στραφήσεται εἰς μῖσο(ς).

Fig. 195. Teaching of the Twelve Apostles, 1056 A.D.

763. Fig. 196 stands just on the borderland between this period and the next, the text is quite archaistic, but the capricious forms in the commentary (six different forms of ε), the numerous abbreviations, the careless breathings and the accents made in one with the letters (l. 6) betray its late date.

Late
Minuscule.

The same caprice goes on increasing; in Fig. 197 we have a by no means extreme example of the late period during which every letter has at least two forms current, one minuscule and one uncial, and each of these often a tall and a short variety besides perhaps several special shapes when entering into ligatures, many of which are themselves new. The abbreviations may be as frequent as ever, and a trick comes in of making quasi-abbreviations by writing some letters above others. In all this it is difficult to trace any logical development as each scribe had his own peculiar style, often founded on an ancient model or quite eclectic: MSS. written for Italian humanists are generally rather neater; their forms, even the most complicated, were imitated by the printers with astonishing

fidelity. It was not till the nineteenth century that they got rid of the ligatures ϑ ($\sigma\upsilon$) and ς ($\sigma\tau$). Our distinction between σ and s is all that remains of the alternative forms; in other cases either the cursive or the uncial has prevailed.

764. Assigning a MS. to a particular locality is even more difficult than dating it. In the papyrus period nearly everything comes from Egypt, we have just evidence enough to infer that in other parts of the Greek world the book-hand was much the same whereas

1 » ΚΑΙ ΕΤΙ ΕΙ ΔΟΥΣ ΠΟΤΟΝ ΗΛΙΟΝ ΤΟ ΠΟΝΤΙΚΟΝ
 2 » ΣΕΩΣ· ΕΚΕΙ Ο ΑΣΕΒΗΣ· ΚΑΙ ΤΟ ΤΩΝ ΤΟΥ
 3 » ΔΙΚΑΙΟΥ ΕΚΕΙ Ο ΔΟΣΕΒΗΣ· ΕΙΠΟΝ ΡΕ ΓΑΡ ΕΡΜΑΡ
 4 » ΔΙΑΜΟΥ· ΣΥΝ ΤΟΝ ΔΙΚΑΙΟΝ ΚΑΙ ΤΟΝ ΑΣΕΒΗ ΗΚΡΙ
 5 » ΜΕΙ Ο ΘΕΟΣ· ΕΡΜΕΙΝΙΑ·
 6 » ΕΙΔΟΝ ΔΥΤ' ΚΑΤΩΤΑΤ ΜΕΡΣΙ ΚΟΛΑΣΕΩΣ ΒΑΡΑΘΡΟΝ
 7 » ΤΗ ΔΥΣΣΕΒΕΙ ΔΕΧΟΜΕΝΟΝ· ΕΥΣΕΒΕΣΙ ΔΕ ΧΩΡΟΝ ΕΤΕΡΟΝ
 8 » ΑΝΕΙΜΕΝΟΝ· ΛΕΓΩ ΟΥ(ΡΑΝΟ)Ν ΟΤΙ ΠΑΝΤ(Α)Σ ΑΞΕΙ ΕΙΣ ΚΡΙΣΙΝ
 9 » Ο ΘΕΟΣ ΔΙΚΑΙΟΥΣ ΚΑΙ ΑΣΕΒΕΙΣ· ΙΣ ΠΑΝΤΑ ΗΜ(Ω)Ν ΤΑ
 10 » ΠΡΑΓΜ(Α)Τ(Α) ΗΓΧΟΥΝ ΕΡΓΑ, ΕΞΕΤΑΣΕΙ· ΑΠΟΝΕΜ(Ω)Ν ΕΚΑΣΤΩ[Ι] Κ(Α)Τ' Α-
 11 » ΞΙ(ΑΝ)· ΟΥ ΜΟΝ ΤΩΝ ΕΡΓΩΝ, ΑΛΛΑ ΚΑΙ ΤΩΝ ΛΟΓΩΝ.

» Καὶ ἐτι εἶδον ὑπὸ τὸν ἥλιον τόπον τῆς κρι-

» σεως· ἐκεῖ ὁ ἀσεβῆς· καὶ τόπον τοῦ

» δι(καί)ου ἐκεῖ ὁ εὐσεβῆς· εἶπον ἐγὼ ἐν καρ-

» δια[ι] μου· σὺν, τὸν δι(καί)ον καὶ [σὺν] τὸν ἀσεβῆ κρι-

» νεὶ ὁ θεός· ἐρμεῖ(φορ η)νία

Εἶδον ἐν τ(οῖς) κατωτάτ(οῖς) μέρσι κολάσε(ως) βάραθρ(ον)

τ(οὺς) δυσσεβεῖς δεχόμε(νον)· εὐσεβεῖσι (δὲ) χώρον ἕτερο(ν)

ἀνεῖμ(ενόν)· λέγω οὐ(ρανόν)ν ὅτι πάντ(α)σ ἀξει εἰς κρίσιν

ὁ θεός δι(καί)ους καὶ ἀσεβεῖς· καὶ πάντα ἡμ(ῶν) τὰ

10 π(ρά)γμ(α)τ(α) ἡγ(χ)οῦν ἐργα, ἐξετάσει· ἀπονεμ(ῶν) ἐκαστῶ[ι] κ(α)τ' ἀ-

ξί(αν)· οὐ μόν(ον) τῶν ἐργῶν, ἀλλὰ καὶ τῶν λόγῶν.

Fig. 196. Commentary on Ecclesiastes, 1203 A.D. Cav. Lietzm. 34.

the cursives show peculiarities. Some of the vellum uncials are uncontestedly Egyptian, others may have come from there, there are rather few of the earlier ones which certainly came from elsewhere. Later, as is natural, Constantinople is the centre from which most of our extant MSS. seem to have come: even when there are indications of a book having been written in some province no difference in style enables us to pick out

other mss. from the same region. Only in the Greek districts of S. Italy there seems to have been a special school, but its produce is almost exclusively theological. The fact is that Greek was not widely enough spread to encourage great local variations. Greek as written in Western Europe by scribes more used to Latin script can hardly be reckoned as true Greek, the forms showing more and more Latin influence until knowledge of Greek dies out in the tenth century. Greek scribes working in Italy in the fifteenth and sixteenth centuries brought their native hands with them.

- 1 $\text{C}\bar{\omega}\nu\mu\acute{\alpha}\delta\eta\ \delta\lambda\theta\acute{\iota}\tau\acute{o}\ \pi\epsilon\pi\omicron\iota\eta\kappa\acute{\epsilon}\nu\alpha\iota\ \mu\omicron\lambda\lambda\acute{\alpha}\ \beta\iota\beta\lambda\iota\alpha\gamma\ \cdot\ \mu\eta\ \acute{\alpha}\kappa\omega\upsilon\nu\ \bar{\omega}\varsigma\ \acute{\epsilon}\omega\iota\kappa\acute{\epsilon}\tau\omicron\iota\ \sigma\omicron\lambda\omicron\mu\acute{\omega}\nu\omicron\varsigma\ \lambda\acute{\epsilon}\gamma\omicron\nu\tau\omicron\varsigma\ \cdot\ \upsilon\acute{\lambda}\acute{\epsilon}\ \phi\acute{\upsilon}\lambda\alpha\chi\alpha\iota\ \tau\omicron\upsilon\ \mu\omicron\iota\eta\sigma\iota\ \beta\iota\beta\lambda\iota\alpha\ \mu\omicron\lambda\lambda\acute{\alpha}\ \cdot\ \delta\ \mu\eta\ \sigma\pi\epsilon\upsilon\delta\epsilon\ \acute{\epsilon}\pi\iota\ \sigma\tau\acute{o}\mu\alpha\tau\acute{\iota}\ \sigma\omicron\upsilon\ \cdot\ \delta\ \kappa\alpha\rho\delta\iota\ \sigma\omicron\upsilon\ \mu\eta\ \tau\alpha\chi\upsilon\nu\acute{\alpha}\tau\omega\ \tau\omicron\upsilon\ \acute{\epsilon}\xi\epsilon\gamma\epsilon\kappa\acute{\iota}\nu\ \lambda\acute{o}\gamma\omicron\nu\ \acute{\alpha}\pi\omicron\delta\ \pi\omicron\sigma\omega\pi\omicron\upsilon\ \tau\omicron\upsilon\ \theta\epsilon\omicron\upsilon\ \cdot\ \delta\tau\iota\ \delta\ \theta\epsilon\acute{o}\varsigma\ \acute{\epsilon}\nu\ \tau\omicron\upsilon\ \omicron\upsilon\rho\alpha\nu\acute{\omega}\ \acute{\alpha}\nu\omega\ \cdot\ \delta\ \sigma\acute{\upsilon}\ \acute{\epsilon}\pi\iota\ \tau\eta\varsigma\ \gamma\eta\varsigma\ \kappa\alpha\tau\omega\ \cdot\ \delta\iota\alpha\ \tau\omicron\upsilon\tau\omicron\ \acute{\epsilon}\sigma\tau\omega\sigma\alpha\nu\ \delta\iota\ \lambda\acute{o}\gamma\omicron\iota\ \sigma\omicron\upsilon\ \acute{o}\lambda\iota\gamma\omicron\iota\ \cdot\ \acute{\epsilon}\iota\ \sigma\iota\ \gamma\acute{\alpha}\rho\ \lambda\acute{o}\gamma\omicron\iota\ \mu\omicron\lambda\lambda\omicron\iota\ \pi\lambda\eta\theta\acute{\upsilon}\nu\omicron\nu\tau\epsilon\ \mu\alpha\tau\alpha\iota\acute{\upsilon}\tau\eta\tau\alpha\ \cdot\ \delta\ \mu\eta\ \gamma\acute{\iota}\nu\omicron\upsilon\ \delta\iota\kappa\alpha\iota\omicron\varsigma\ \mu\omicron\lambda\upsilon\ \cdot\ \acute{\epsilon}\sigma\tau\iota\ \gamma\acute{\alpha}\rho\ \delta\iota\kappa\alpha\iota\omicron\varsigma\ \acute{\alpha}\pi\omicron\lambda\lambda\acute{\upsilon}\mu\epsilon\mu\omicron\varsigma\ \acute{\epsilon}\nu\ \delta\iota\kappa\alpha\iota\acute{\omega}\mu\alpha\tau\iota\ \alpha\acute{\upsilon}\tau\omicron\upsilon\ \cdot\ \delta\ \mu\eta\ \sigma\omicron\phi\acute{\iota}\zeta\omicron\nu\ \pi\epsilon\rho\iota\sigma\acute{\alpha}\ \cdot\ \mu\eta\ \mu\omicron\tau\epsilon\ \acute{\alpha}\sigma\epsilon\beta\acute{\eta}\sigma\eta\varsigma\ \cdot\ \tau\alpha\upsilon\tau\alpha\ \pi\acute{\alpha}\nu\tau\alpha\ \pi\alpha\rho\omega\sigma\acute{\alpha}\mu\epsilon\mu\omicron\varsigma\ \pi\alpha\rho\epsilon\sigma\phi\acute{\alpha}\lambda\eta\ \tau\omicron\upsilon\ \pi\rho\acute{\epsilon}\mu\omicron\tau\omicron\varsigma\ \dagger$

$\text{C}\bar{\omega}\nu\mu\acute{\alpha}\delta\eta\ \delta\lambda\theta\acute{\iota}\tau\acute{o}\ \pi\epsilon\pi\omicron\iota\eta\kappa\acute{\epsilon}\nu\alpha\iota\ \mu\omicron\lambda\lambda\acute{\alpha}\ \beta\iota\beta\lambda\iota\alpha\ \cdot\ \mu\eta\ \acute{\alpha}\kappa\omega\upsilon\upsilon\ \bar{\omega}\varsigma\ \acute{\epsilon}\omega\iota\kappa\acute{\epsilon}\tau\omicron\iota\ \sigma\omicron\lambda\omicron\mu\acute{\omega}\nu\omicron\varsigma\ \lambda\acute{\epsilon}\gamma\omicron\nu\tau\omicron\varsigma\ \cdot\ \upsilon\acute{\lambda}\acute{\epsilon}\ \phi\acute{\upsilon}\lambda\alpha\chi\alpha\iota\ \tau\omicron\upsilon\ \mu\omicron\iota\eta\sigma\iota\ \beta\iota\beta\lambda\iota\alpha\ \mu\omicron\lambda\lambda\acute{\alpha}\ \cdot\ \delta\ \mu\eta\ \sigma\pi\epsilon\upsilon\delta\epsilon\ \acute{\epsilon}\pi\iota\ \sigma\tau\acute{o}\mu\alpha\tau\acute{\iota}\ \sigma\omicron\upsilon\ \cdot\ \delta\ \kappa\alpha\rho\delta\iota\ \sigma\omicron\upsilon\ \mu\eta\ \tau\alpha\chi\upsilon\nu\acute{\alpha}\tau\omega\ \tau\omicron\upsilon\ \acute{\epsilon}\ξ\epsilon\gamma\epsilon\kappa\acute{\iota}\ν\ \lambda\acute{o}\gamma\omicron\nu\ \acute{\alpha}\π\omicron\delta\ \pi\omicron\sigma\omega\π\omicron\upsilon\ \tau\omicron\upsilon\ \theta\epsilon\omicron\upsilon\ \cdot\ \delta\tau\iota\ \delta\ \theta\epsilon\acute{o}\varsigma\ \acute{\epsilon}\ν\ \tau\omicron\upsilon\ \omicron\upsilon\rho\alpha\nu\acute{\omega}\ \acute{\alpha}\ν\omega\ \cdot\ \delta\ \sigma\acute{\upsilon}\ \acute{\epsilon}\π\iota\ \tau\eta\varsigma\ \gamma\η\varsigma\ \kappa\α\tau\omega\ \cdot\ \delta\iota\α\ \tau\omicron\upsilon\tau\omicron\ \acute{\epsilon}\σ\tau\omega\σ\α\n\ \delta\ι\ \λ\acute{o}\γ\omicron\ι\ \sigma\omicron\upsilon\ \acute{o}\λ\ι\γ\omicron\ι\ \cdot\ \acute{\epsilon}\ι\ \sigma\ι\ \γ\acute{\α}\ρ\ \λ\acute{o}\γ\omicron\ι\ \μ\omicron\λ\λ\omicron\ι\ \π\λ\η\θ\acute{\upsilon}\ν\omicron\υ\τ\epsilon\ \μ\α\τ\α\ι\acute{\upsilon}\τ\η\τ\α\ \cdot\ \delta\ \μ\η\ \γ\acute{\ι}\ν\omicron\υ\ \δ\ι\κ\α\ι\omicron\varsigma\ \μ\omicron\λ\υ\ \cdot\ \acute{\epsilon}\σ\tau\ι\ \γ\acute{\α}\ρ\ \δ\ι\κ\α\ι\omicron\varsigma\ \acute{\α}\π\omicron\λ\λ\acute{\upsilon}\μ\epsilon\μ\omicron\varsigma\ \acute{\epsilon}\ν\ \delta\ι\κ\α\ι\acute{\omega}\μ\α\τ\ι\ \α\acute{\upsilon}\τ\omicron\upsilon\ \cdot\ \delta\ \μ\η\ \σ\omicron\φ\acute{\ι}\z\omicron\n\ \π\epsilon\r\omicron\sigma\acute{\alpha}\ \cdot\ \μ\η\ \μ\omicron\τ\epsilon\ \acute{\α}\σ\epsilon\β\acute{\eta}\sigma\eta\varsigma\ \cdot\ \tau\α\upsilon\τ\α\ \π\acute{\α}\ν\τ\α\ \π\α\r\ω\σ\acute{\α}\μ\epsilon\μ\omicron\varsigma\ \π\α\r\epsilon\σ\φ\acute{\α}\λ\η\ \τ\omicron\upsilon\ \π\r\acute{\epsilon}\μ\omicron\τ\omicron\varsigma\ \dagger$

- 1 $\acute{\alpha}\nu\omicron\mu\acute{\alpha}\sigma\eta\ \delta\iota\acute{\alpha}\ \tau\acute{o}\ \pi\epsilon\pi\omicron\iota\eta\kappa\acute{\epsilon}\nu\alpha\iota\ \mu\omicron\lambda\lambda\acute{\alpha}\ \beta\iota\beta\lambda\iota\alpha\ \cdot\ \mu\eta\ \acute{\alpha}\kappa\omega\upsilon\upsilon\ \bar{\omega}\varsigma\ \acute{\epsilon}\omega\iota\kappa\acute{\epsilon}\tau\omicron\iota\ \sigma\omicron\lambda\omicron\mu\acute{\omega}\nu\omicron\varsigma\ \lambda\acute{\epsilon}\gamma\omicron\nu\tau\omicron\varsigma\ \cdot\ \upsilon\acute{\lambda}\acute{\epsilon}\ \phi\acute{\upsilon}\lambda\alpha\chi\alpha\iota\ \tau\omicron\upsilon\ \mu\omicron\iota\eta\sigma\iota\ \beta\iota\beta\lambda\iota\alpha\ \mu\omicron\lambda\lambda\acute{\alpha}\ \cdot\ (\kappa\alpha\iota)\ \mu\eta\ \sigma\pi\epsilon\upsilon\delta\epsilon\ \acute{\epsilon}\pi\iota\ \sigma\tau\acute{o}\mu\alpha\tau\acute{\iota}\ \sigma\omicron\upsilon\ \cdot\ (\kappa\alpha\iota)\ \kappa\alpha\rho\delta\iota\ \sigma\omicron\upsilon\ \mu\eta\ \tau\alpha\chi\upsilon\nu\acute{\alpha}\tau\omega\ \tau\omicron\upsilon\ \acute{\epsilon}\ξ\epsilon\gamma\epsilon\kappa\acute{\iota}\ν\ \lambda\acute{o}\γ\omicron\n\ \acute{\α}\π\omicron\delta\ \π\omicron\σ\ω\π\omicron\upsilon\ \tau\omicron\upsilon\ \theta\epsilon\omicron\upsilon\ \cdot\ \delta\tau\iota\ \delta\ \theta\epsilon\acute{o}\varsigma\ \acute{\epsilon}\ν\ \tau\omicron\upsilon\ \omicron\upsilon\rho\alpha\nu\acute{\omega}\ \acute{\α}\ν\ω\ \cdot\ (\kappa\α\ι)\ \acute{\sigma}\acute{\upsilon}\ \acute{\epsilon}\π\ι\ \tau\η\varsigma\ \gamma\η\varsigma\ \kappa\α\τ\ω\ \cdot\ \delta\ι\α\ \tau\omicron\upsilon\tau\omicron\ \acute{\epsilon}\σ\tau\omega\σ\α\n\ \delta\ι\ \λ\acute{o}\γ\omicron\ι\ \sigma\omicron\upsilon\ \acute{o}\λ\ι\γ\omicron\ι\ \cdot\ \acute{\epsilon}\ι\ \sigma\ι\ \γ\acute{\α}\ρ\ \λ\acute{o}\γ\omicron\ι\ \μ\omicron\λ\λ\omicron\ι\ \π\λ\η\θ\acute{\upsilon}\ν\omicron\υ\τ\epsilon\ \μ\α\τ\α\ι\acute{\upsilon}\τ\η\τ\α\ \cdot\ (\kappa\α\ι)\ \μ\η\ \γ\acute{\ι}\ν\omicron\υ\ \δ\ι\κ\α\ι\omicron\varsigma\ \μ\omicron\λ\υ\ \cdot\ \acute{\epsilon}\σ\tau\ι\ \γ\acute{\α}\ρ\ \δ\ι\κ\α\ι\omicron\varsigma\ \acute{\α}\π\omicron\λ\λ\acute{\upsilon}\μ\epsilon\μ\omicron\varsigma\ \acute{\epsilon}\ν\ \delta\ι\κ\α\ι\acute{\omega}\μ\α\τ\ι\ \α\acute{\upsilon}\τ\omicron\upsilon\ \cdot\ (\kappa\α\ι)\ \μ\η\ \σ\omicron\φ\acute{\ι}\z\omicron\n\ \π\epsilon\r\omicron\sigma\acute{\α}\ \cdot\ \μ\η\ \μ\omicron\τ\epsilon\ \acute{\α}\σ\epsilon\β\acute{\eta}\sigma\eta\varsigma\ \cdot\ \tau\α\upsilon\τ\α\ \π\acute{\α}\ν\τ\α\ \π\α\r\ω\σ\acute{\α}\μ\epsilon\μ\omicron\varsigma\ \π\α\r\epsilon\σ\φ\acute{\α}\λ\η\ \τ\omicron\upsilon\ \π\r\acute{\epsilon}\μ\omicron\τ\omicron\varsigma\ \dagger$
- † τέλειωθ(η)τὸ παρ(όν) βιβλίον ἢ σουδ(ᾶ) διὰ χειρ(ὸς) ἐμοῦ γεωργ(ίου) τοῦ βαιοφορ(ου) ἐν ἔτει, 5^ῶ 3^ῶ δεκατω (Ἰ)ν(δικτιῶν)ος δεκάτ(ης) μηνί Ιουν(ίῳ) ἐπ'†

Fig. 197. Suidas, 1402 A.D. *Pal. Soc. I.* 181.

765. Abbreviations were rare in most papyrus books, almost confined to $\bar{\omega}$ signifying ν at the end of a line. In a few mss. we find a system of adding $\acute{\prime}$, $\grave{\prime}$, or ' to each letter to represent the commonest words or syllables beginning with it, e.g. $\acute{\iota}$ = $\tau\omega\nu$, $\grave{\iota}$ = $\tau\eta\nu$, Abbreviations.

$\tau' = \tau\eta\varsigma$, or $\kappa' = \kappa\alpha\iota$, $\kappa' = \kappa\alpha\tau\grave{\alpha}$. In cursive documents words are *suspended*, i.e. only the first or the beginning letters are written and then to indicate that the word is incomplete there may follow a transverse stroke or the last letter written is above the line: this upper letter may be a characteristic one of the omitted part of the word. Special signs are also used for words which often occur (e.g. $\text{L} = \text{year}$ and $\text{†} = \text{drachma}$ on Fig. 188).

With Christianity came in a new system called *contraction* probably having its germ not in a desire to save time or space, but in the Jewish reverence for the name of God: it consisted in leaving out the middle of a word but giving the beginning and the ending, the latter changing with the flexion or even admitting derivative terminations, e.g. the Vatican bible has $\overline{\theta\varsigma} = \theta\epsilon\acute{o}\varsigma$, $\overline{\kappa\varsigma} = \kappa\acute{\upsilon}\rho\iota\omicron\varsigma$, $\overline{\pi\nu\alpha} = \pi\nu\epsilon\acute{\upsilon}\mu\alpha$, $\overline{\pi\eta\rho} = \pi\alpha\tau\acute{\eta}\rho$, $\overline{\omicron\gamma\nu\omicron\varsigma} = \omicron\upsilon\rho\alpha\nu\acute{o}\varsigma$, $\overline{\Delta\Nu\omicron\varsigma} = \acute{\alpha}\nu\theta\rho\omega\pi\omicron\varsigma$, $\overline{\Delta\delta\Delta} = \Delta\alpha\nu\epsilon\acute{\iota}\delta$, $\overline{\iota\eta\lambda} = \text{Ἰσραήλ}$, $\overline{\iota\lambda\eta\mu} = \text{Ἰερουσαλὴμ}$, $\overline{\iota\varsigma} = \text{Ἰησοῦς}$, $\overline{\chi\varsigma} = \text{Χριστός}$, $\overline{\gamma\varsigma} = \nu\acute{\iota}\omicron\varsigma$, $\overline{\mu\eta\rho} = \mu\acute{\eta}\tau\eta\rho$: in later MSS. are some variations of these and contractions for $\sigma\omega\tau\acute{\eta}\rho$ and $\sigma\tau\alpha\upsilon\rho\acute{o}\varsigma$ were added but in Greek there are only these fifteen *nomina sacra*, as they are called. They are marked by a stroke over, a sign used in all times of Greek writing to distinguish letters taken in some abnormal sense, e.g. numerals and even sometimes proper names.

With the vellum minuscule appears a complete system of abbreviation, at first hardly allowed in the text but soon used equally in text and notes; it is made up of survivals from the haphazard papyrus use, of the *nomina sacra*, and of a full set of signs for the different syllabic endings borrowed from a shorthand in which a few whole books are preserved. At first these signs are made accurately and though troublesome are not really difficult, but in the careless MSS. of later periods they lose their shapes and are mixed up with breathings, accents and overwritten letters. The best way to learn these signs is to work through facsimiles provided with transcripts, even the few here given would if carefully read teach most of them; the tables in the manuals of palaeography are useful for reference though often disappointing.

766. In early MSS. words are not divided, in cursive hands there may

Accents,
Punctuation,
etc.

be an unconscious division and the minuscules help a little more but often they are very misleading, a new word beginning in the middle of a ligature: sometimes in uncials at difficult places or after words with unusual endings a comma or apostrophe is put in, usually not by the original scribe. Accents and breathings are sporadic in papyri, being commonest in the epic or lyric poets (Fig. 189). From the eighth century they are universal in uncials and minuscules. Double accents often distinguish the particles $\mu\acute{\epsilon}\nu$ and $\delta\grave{\epsilon}$: double dots or lines are often a help in picking out ι or υ . Spelling is good in Greek MSS. except for itacism, e.g. $\epsilon\iota$ for $\bar{\iota}$ or ϵ for $\alpha\iota$ (Fig. 194) and great uncertainty as to mute iota: if put in this is adscript until about 1200, afterwards it is subscript.

Punctuation is most haphazard except in the best minuscules but even in uncials the end of a paragraph in our sense is marked by a horizontal stroke called *paragraphos* under its last line; often the new paragraph begins in the line, perhaps there is a slight gap before it, sometimes the first whole line in a paragraph begins with a bigger letter even though it does not begin a word. Codex Sinaiticus (Fig. 191) already forestalls the modern way of leaving the last line of the paragraph unfilled up and emphasizing the first letter of the next: so emphasized the letter quickly develops into an ornamental capital. Ends of metrical divisions are marked by a *coronis* or hook with the *paragraphos*, and this may take fanciful shapes especially at the end of a book. Other marks denote quotations, give references to marginal notes or statements of alternative readings often with $\rho^{\text{P}} = \gamma\rho\acute{\alpha}\phi\epsilon\tau\alpha\iota$, or to places into which omitted matter should be inserted (Fig. 189) a fruitful source of textual error, or finally merely fill up ugly spaces at the end of a line (Fig. 190).

767. Beginning with 800 A.D. Greek scribes took to dating their work almost always by the Byzantine reckoning which put the creation at Sept. 1, 5508 B.C. To find the date of, *e.g.* Dated MSS. Fig. 197 subtract 5508 from 6910, result 1402: had it been written between Sept. 1 and Dec. 31 we should have subtracted 5509. The indiction, which is also often mentioned, is a fifteen year cycle beginning in 312 A.D., but we are only given the number of the year in the cycle, so unless we have further data the indiction is no help. Tables of these and other chronological elements are in Gardthausen.

Sir E. Maunde Thompson's *Introduction to Greek and Latin Palaeography*, Oxford, 1912, is the best summary in English, but most of its matter is contained in his *Handbook*, London, 1906. Bibliography. V. Gardthausen's *Griechische Palaeographie*, 2nd ed., Leipzig, 1911-13, is the standard reference book. Cheap facsimiles are, for papyri, W. Schubart, *Papyri Graecae Berolinenses*, Bonn, 1911 (6s.), for vellum MSS. P. F. de Cavalieri et J. Lietzmann, *Specimina Codicum Graecorum Bibl. Vat.* Bonn, 1910 (6s.), mostly theological. Fr. Steffens, *Proben aus griechischen Handschriften*, Trier, 1912 (7s. 6d.), gives a very varied selection. The great series for reference is that of the *Palaeographical Society*, London, 1873-94; *New Pal. Soc.*, 1903-. See also Sir F. G. Kenyon, *Palaeography of Greek Papyri*, Oxford, 1899. The tables in Cereteli, *Abbreviations in Greek MSS.*, St Petersburg, 1904, can be used although the text is in Russian.

VIII. 4. TEXTUAL CRITICISM.

768. TEXTUAL criticism has for its sole object to determine as nearly as possible the words written by the author of the original text, wherever the reading has become corrupt or doubtful. In the case of a modern printed text which is known to have been revised by the author himself, textual criticism has no place, unless it be in the detection of misprints. There is a textual criticism of Shakespeare, owing to the conditions under which the plays were first printed: there can be none of Tennyson. The textual critic must constantly keep in view the simple and single aim of his work.

769. The mss. of an ancient author are our primary witnesses as to what he wrote. We look, then, in the first place, to the actual testimony which they bear, without asking, as yet, what degree of antecedent credibility belongs to this or that manuscript. The intrinsic probability of a reading is relative simply to the original author of the text, and has nothing to do with the transcriber of the ms. We ask, if there is a doubt:—‘Is this what the ancient author is likely to have written here?’ In judging this question, we have regard to the general characteristics of his diction and of his thought, and to the particular context. This test may not seldom suffice to warrant a negative decision: we can pronounce, with tolerable certainty, that such or such a reading is impossible. On the positive side, however, such a test will more rarely be decisive. The appeal is to our own conception of the author’s style and mind, and of the context. Different conclusions may be reached by equally competent judges. Two things especially should be remembered. (1) ‘Homer sometimes nods’; even the best authors do not always write worthily of themselves. Lapses from felicity of style, from clearness, from consistency, or even (through carelessness) from correct grammar, may occur now and then in the best writings. A critic with the requisite gifts might be able here and there to suggest some verbal change which would be a real improvement. The better of two words or phrases in a given place, however clearly its superiority can be shown, will not necessarily be that which the author used. (2) In making a choice between two or more variants, the simple test of intrinsic fitness will lead us to

prefer that reading which best corresponds with our view of the author's intention. But it may happen that we see only a part of his intention. The reading which we reject may have been preferred by him because it expressed some element of thought or feeling which we have failed to seize. These are two general sources of error to which judgment by intrinsic probability is liable. There are others special to particular moods or tendencies in the individual critic.

But the internal evidence of readings supplies a further test of a wholly different kind, which can often be applied as a check on intrinsic probability. Suppose that, in a given passage, several different readings are found: *e.g.* one MS., or group of MSS., has $\gamma\epsilon\lambda\omega\nu$, another $\tau\epsilon\lambda\omega\nu$, a third $\pi\epsilon\delta\omega\nu$: which of these readings is best fitted to account for the existence of the other two? This question, it will be seen, has nothing to do with the intrinsic fitness,—the comparative merit,—of the readings themselves. It is concerned solely with their transmission by copyists. On the hypothesis that reading *a* is the original one, can we suggest how it came to be corrupted into readings *b* and *c*? This is what has been called the test of 'transcriptional probability.'

Tran-
scriptional
probability.

770. In applying this test, large help can be derived from experience. It is known that certain causes of corruption in the written tradition of classical texts were at work from an early date,—as early, indeed, as the age of the classical writers themselves. These causes may be brought under two general heads:—I. changes due to mere error on the part of copyists, which are by far the more frequent: II. changes deliberately made.

Known
causes of
corruption in
MSS.

I. The sources of accidental error in transcription are so various that any attempt to enumerate and classify them must be very incomplete. But it is useful to note some of the causes which operate most frequently. (1) Letters are confused through some partial resemblance of form: as A, Δ, Λ: C, Ε, Θ, Ο: Γ, Π, Τ. ΛΛ is read as Μ, or *vice versa* (as in Soph. *Ant.* 436 $\acute{\alpha}\mu\acute{\iota}$ was corrupted to $\acute{\alpha}\lambda\lambda'$): ΛΙ or ΑΙ is read as Ν: Κ, as ΙC (so that, *e.g.*, $\acute{\epsilon}\kappa$ becomes $\acute{\epsilon}\iota\varsigma$), or *vice versa* ($\Sigma\acute{\kappa}\acute{\upsilon}\phi\omicron\nu$ for $\Sigma\acute{\iota}\sigma\upsilon\phi\omicron\nu$ in Athen. 500 B). As so much of ancient copying was purely mechanical,—done by men who simply transcribed the words which they seemed to see before them, without thinking of the sense,—errors due to this cause are often very gross: *e.g.* in Thuc. vi. 74 § 2 (where the reference is to the Athenian army in Sicily) our MSS. have:— $\acute{\alpha}\pi\epsilon\lambda\theta\acute{\omicron}\nu\tau\epsilon\varsigma\ \acute{\epsilon}\varsigma\ \text{Ν}\acute{\alpha}\xi\omicron\nu\ \theta\rho\acute{\alpha}\kappa\alpha\varsigma$ (or $\theta\rho\acute{\alpha}\iota\kappa\alpha\varsigma$, $\theta\rho\acute{\alpha}\kappa\alpha\varsigma$, $\theta\rho\alpha\kappa\alpha\varsigma$) $\sigma\tau\alpha\upsilon\rho\acute{\omega}\mu\alpha\tau\alpha\ \pi\epsilon\rho\acute{\iota}\ \tau\acute{\omicron}\ \sigma\tau\rho\alpha\tau\acute{\omicron}\pi\acute{\epsilon}\delta\omicron\nu\ \pi\omicron\iota\eta\sigma\acute{\alpha}\mu\epsilon\nu\omicron\iota\ \alpha\upsilon\tau\omicron\upsilon\ \delta\iota\epsilon\chi\acute{\epsilon}\iota\mu\alpha\zeta\omicron\nu$. Here ΘΡΑΚΑC arose from ΟΡΑΚΑΙ, *i.e.* $\acute{\omicron}\rho\alpha\ \kappa\alpha\acute{\iota}$,— $\acute{\omicron}\rho\alpha$ (which is actually found in one of the scholia on the passage) being itself a corruption of $\acute{\omicron}\rho\iota\alpha$. We must read, then, $\acute{\omicron}\rho\iota\alpha\ \kappa\alpha\acute{\iota}\ \sigma\tau\alpha\upsilon\rho\acute{\omega}\mu\alpha\tau\alpha$ ('enclosure and palisade'). And the fact that ΚΑΙ became ΚΑC is the more intelligible

Accidental
errors.

if the corruption occurred in the Ptolemaic age, since one form of the Ptolemaic sigma (as seen, *e.g.*, in the new papyrus of Bacchylides) resembles I with a small curve at the top. Numerals were especially liable to corruption from this cause; *e.g.* Ε (5) might be confused with Θ (9), or Ο (70): Γ (3) with Γ (80), etc.

(2) Abbreviations of common words, such as *καί, θεός, άνθρωπος, πατήρ*, etc., were often sources of error. The *Commentatio Palaeographica* of F. J. Bast (appended to G. H. Schaefer's edition of Gregorius Corinthus, Leipzig, 1811) contains a systematic and copious treatment of this subject, and, generally, of the errors arising from confusion of letters or syllables, whether in majuscule or in minuscule writing.

(3) Letters or syllables might be wrongly joined or disjoined: *e.g.* *τρίηρεσι ν'* (50) might be read as *τρίηρεσιν: ένόν* as *έν δν*. In Thuc. VIII. 46 § 2 *τάδ' είναι* became *τά δεινά*.

(4) The influence of the immediate context has been a fertile source of error in transcription. (i) The same word or phrase occurs twice, perhaps, within a comparatively small space: the scribe's eye wanders to the second place where it stands, causing him to omit the clause or sentence in which it first appears. (ii) The scribe wrongly repeats some word or phrase, mentally associating it with some other word or phrase which really occurs twice. (iii) Or, thinking of a phrase which has just occurred, he assimilates another phrase to it; as in Isocr. or. 1 § 3 some mss. have *δρκους* (instead of *γάμοις*) *έμμένειν*, due to a preceding *δρκους έμμένων*. (iv) The grammatical form of a word (case, mood, etc.) is wrongly assimilated to that of a neighbouring word. (v) A word is accidentally omitted through its resemblance to the termination of the word next before it, or to the beginning of the word next after it: *e.g.* *άν, έν* before or after *-αν, -εν*.

(5) An explanatory 'gloss,' written by some reader in the margin or above the line, is erroneously substituted by a copyist for the genuine reading; as in Aesch. *Ag.* 282 our mss. have *άγγέλου*, the true *άγγάρον* being preserved only in *Etym. Mag.*: or is added to it; as in Thuc. VII. 58 § 3, after the words *νεοδαμώδεις δέ τοις άλλους και Είλωτας*, our mss. have the gloss, *δύναται δέ τó νεοδαμώδες ελεύθερον ήδη είναι*.

(6) Confusion of sounds must be reckoned among the occasional sources of error in mss., though its operation was limited. There can be no doubt that in later antiquity the *librarii* sometimes employed dictation; a ms. was read aloud, and copied by several scribes simultaneously. The same practice probably survived, to some extent, in the earlier Byzantine age. In the later Greek pronunciation, *ει, η, ι, οι, υ* were sounds closely alike (as they still are); *αι* and *ε*, *ω* and *ο*, were hardly distinguishable. After nasals, *π* and *β*, *τ* and *δ*, *κ* and *γ* were similar. This cause, however, tended rather to mere mis-spelling than to larger or deeper corruptions. Madvig assumes it when in Plut. *Pelop.* 23 he suggests *σόν οϊσισω* instead of *συνίστησιν*: an ingenious, though not a probable emendation.

(7) Erroneous transposition occurs under various conditions. (a) If the genuine order of words be a rhetorical or a poetical one, it is frequently changed into the more natural and usual order; often, probably, through mere inadvertence, the scribe having glanced at a whole phrase in the book which he was copying, without noting the sequence of the words. Innumerable examples of this occur in the texts of poets, being proved by the violation of metre. Thus in the newly-found papyrus of Bacchylides, which is as old as *circa* 50 B.C., we find in ode xiv. [xv. ed. Kenyon] v. 47, ἀρχεν λόγων δικαίων instead of the genuine λόγων ἀρχεν δικαίων. (b) Again, it may have happened that a scribe has accidentally omitted a word, or a clause, or a whole sentence: he, or a corrector, afterwards supplies it in the margin: a later copyist then restores it to the text, but in a wrong place. When, in the ms. of a poem, a verse or small group of verses has been incorrectly transposed, such a process will sometimes account for the fact. Larger dislocations of a text may occur through the leaves of a ms. having become deranged.

II. But the mss. of the classics had also been liable, from ancient times, to changes deliberately made. (1) The texts of the classical poets were peculiarly exposed to such changes, owing to the influence of oral recitation. A rhapsode, a chorus-leader, or an actor might add some words or verses, and these might pass into the books. Thus in Pindar *Olymp.* II. 26 f., after φιλεῖ | δέ νιν Παλλὰς αἰεῖ, our four best mss. add φιλέοντι δέ Μοῖσαι, words which, as the scholia attest, Aristophanes of Byzantium pronounced spurious, but which were first banished from the text by the Byzantine critic Demetrius Triclinius (*circa* A.D. 1300—1325). In *Iliad* xxiv. 45, after οὐδέ οἱ αἰδώς, stands the verse, γίγνεται, ἣ τ' ἄνδρας μέγα σίνεται ἦδ' ὀνίνησιν,—interpolated, as Aristonicus remarked, from Hesiod *Op.* 318, 'by some one who thought the sense defective' (because the verb for αἰδώς, viz. ἐστὶ, is understood). With regard to the dramatic texts, alteration or interpolation by actors is well attested. That cause of corruption was already active in the fourth century B.C.: it was in order to check it that, on the proposition of the orator Lycurgus, a standard copy of the three great tragic masters was made at Athens *circa* 330 B.C. Ancient scholia sometimes expressly attribute a false reading to the actors: thus on Eur. *Med.* 909 f., εἰκὸς γὰρ ὄργας θῆλυ ποιεῖσθαι γένος | γάμους παρεμπολῶντος ἀλλοίου πόσει, the scholiast says that 'the actors write' ἐμοῦ instead of πόσει. See also the scholia on Eur. *Med.* 85, 228, 356, 379; *Phoen.* 264; *Andr.* 6.

(2) In the Alexandrian and Roman ages, revisers of texts sometimes altered the reading, in order to make it, as they thought, clearer or more correct. Thus Galen (vol. xvii. 2, p. 110 Kühn), commenting on a passage in the Ἐπιδήμια of Hippocrates, says: τῆς παλαιᾶς γραφῆς οὐσης ταύτης, ἐπὶ τὸ σαφέστερον αὐτὴν μετατεθείκασιν πολλοὶ τῶν ἐξηγητῶν. In the *Φαινόμενα* of Aratus, verse 693, Ἴππος δ' Ὑδροχόοιο μέσον περιελλομένοιο, the astronomer Hipparchus (*circa* 150 B.C.) states that μέσον was the

reading of 'all the copies' known to him; but his contemporary, the commentator Attalus, had changed it to νέον, which is found in all our MSS. So, too, in v. 713 Attalus had changed λήγοντι to ἀιόντι.

(3) It would seem, too, that the order of words was sometimes deliberately altered by revisers, with a view to making it more lucid or effective. Thus in the *Codex Vaticanus* of Thucydides, which from vi. 92 to the end of viii not seldom exhibits an order of words peculiar to itself, there is sometimes reason to suspect such licence.

(4) Mutilations and gaps, dating from a very early time, existed in many of the texts which had come to the Alexandrians. An editor sometimes attempted to supply what was missing. A traditional instance is that of Apellicon (*circa* 100 B.C.), who, in editing the damaged MSS. of Aristotle, εἰς ἀντίγραφα καινὰ μετέηνεγκε τὴν γραφήν, ἀναπληρῶν οὐκ εὖ (Strabo p. 609).

771. Such are some of the principal causes of corruption, accidental or deliberate, which in the course of centuries have affected the transmission of the classical texts. Account has to be taken of one or more of them when a question of 'transcriptional probability' arises. That is, when we have to choose between two or more traditional readings, the knowledge of such facts may enable us to explain how the reading which we adopt can have generated that (or those) which we reject. Or if only one reading has come down, and that one is manifestly corrupt, such knowledge may guide the endeavour to correct it. But no appeal to experience will enable us to frame exhaustive categories of transcriptional error or licence. It is impossible to draw up a list of the motives which might lead to wilful change, or of the accidents which might lead to blunders: the organs of the tradition were not machines, but men.

Hence those general rules which have been called 'canons of criticism,'—founded mainly on observed forms of error or of licence,—should be used with a due sense of their limited validity. To take a familiar example, one of Griesbach's canons of New Testament criticism,—'Prefer the harder reading,'—is valid in most cases (though not necessarily in all) where a transcriber has deliberately altered the reading which he found; since a frequent motive of such change was a wish to make the sense clearer. But it is obviously not valid in a case of accidental error, since the result may be a reading which (if intelligible at all) is 'harder' than the true one.

772. Intrinsic probability, coupled with transcriptional, will sometimes suffice to establish or condemn a reading, or to decide the choice between variants: it may be possible, *e.g.*, to say at once, 'this word, $\theta\alpha\omicron\omicron$, cannot conceivably be right; manifestly it is a corruption of $\theta\alpha\omicron\omicron$.' But it will frequently happen that these tests fail. The choice may lie between two readings, each of which is intrinsically suitable; and we may be unable to perceive either how

Such an analysis is helpful:

but it is necessarily incomplete.

Limited validity of critical canons.

Internal evidence of documents.

reading *b* could have arisen from *a* through error, or why anyone who found *a* in his text should have deliberately changed it to *b*. In such a dilemma there is, however, a further test which will often help us; it is still derived from the internal evidence of readings, but involves a new application of that evidence. The general character of a witness has a bearing on the credibility of any particular deposition which he makes. The general character of a manuscript may aid us in weighing the value of its testimony with regard to a particular reading. There are two mss., A and B: comparing them wherever they differ, we find that the number of readings which are either certain or highly probable is much larger in A than in B. The superiority of A in general trustworthiness may then be taken into account in those cases where a choice between the reading of A and that of B is more difficult. It is true, and must always be remembered, that B may be the worse copy on the whole, and yet in a particular case may have chanced to preserve a true reading which A has lost; such an occurrence is not, indeed, very rare: still, the general character of A will warrant a general presumption in its favour. This is the ground of the rule, 'Knowledge of documents should precede final judgment upon readings.'

General
character of
a MS.

773. Every manuscript has peculiarities of its own. The idiosyncrasy of the scribe appears in traits of handwriting; in a proneness to certain kinds of error, and comparative immunity from others; in a bias of thought or taste which has influenced his work where he had two or more variants before him, and had to choose between them. Such peculiarities can be learned only by close and continued study of the particular ms.; but to learn them is an essential part of the textual critic's business. It is none the less essential when the ancient work happens to be extant in only one ms.; as is the case with the orations of Hypereides, the fables of Babrius, the mimes of Herodas, the odes of Bacchylides, the *Ἀθηναίων Πολιτεία*. An intimate acquaintance with the general characteristics of the solitary witness is needed in gauging the chances that a particular reading is corrupt, and in attempting to amend it. On the other hand, the task of comparing mss. in respect to their general trustworthiness becomes excessively complex and difficult when the number of mss. is large. In such a case it is of the first importance to enquire whether, and how far, the genealogy of the mss. can be traced.

Every MS.
has traits
peculiar to
itself.

774. The genealogical method of studying mss. rests on considerations of a simple kind. That it was almost entirely neglected down to comparatively recent times, is not, however, very surprising. The mss. of the classics are scattered through the libraries of Europe. Before the days of railways few scholars had the means of consulting all the best mss. of a given author, or of procuring accurate collations. Nor were those processes known by which facsimiles can now be produced. It may be added that, from the later period of the

Genealogy
of MSS.

Renaissance down to the early part of the last century, there was a tendency to regard conjectural criticism as a free exercise of scholarship and ingenuity, to be cultivated for its own sake, rather than simply as a remedy to be used only in the last resort, after a careful but baffled scrutiny of the actual data furnished by the MSS.

The varying written copies of a text handed down through centuries are not ultimately independent of each other. They are descendants of a common original, now lost. If we knew all the facts, we could construct an accurate stemma of their descent. The more nearly we can approach to doing so, the better shall we be able to sift the spurious readings from the genuine.

775 In tracing the genealogy of MSS., the general principle is that identity of reading implies identity of origin. Suppose that there are twenty MSS. of an ancient book, and that in a given passage they are divided between two readings; nine of them, let us say, have $\xi\chi\epsilon\iota$, and eleven have $\pi\alpha\rho\acute{\epsilon}\chi\epsilon\iota$. This fact shows that a common ancestor of the nine had the one reading, and a common ancestor of the eleven had the other. The variation carries us back to the point at which two lines of transmission diverged. But, again, of the nine, four in another place have $\acute{\alpha}\rho\gamma\acute{\omicron}\nu$, and five have $\acute{\alpha}\rho\gamma\acute{\omega}\nu$: this indicates a point, lower down in the transmission, at which the immediate ancestors of the two smaller groups diverged from the common ancestor of the nine. Hence this general rule:—In a comparison of variants, the larger arrays of MSS. represent the earlier divergences; the smaller arrays represent the later.

776. This assumes that the different lines of descent have remained independent of each other. But a disturbing element comes in where mixture has occurred; *i.e.* where a copyist has had two or more MSS. before him, and has followed sometimes one, and sometimes another. In the 'mixed' MS. C the texts of A, B, etc., are thus interwoven; and, it may be, in such an intricate manner that they cannot be disentangled. The best help in such cases is afforded by 'conflate' readings, formed by the blending of two variants. *L.g.* one MS., A, has $\epsilon\upsilon\rho\acute{\omega}\nu \tau\alpha\upsilon\tau\alpha$, and another, B, $\lambda\alpha\beta\acute{\omega}\nu \tau\alpha\upsilon\tau\alpha$: if C has $\epsilon\upsilon\rho\acute{\omega}\nu \kappa\alpha\iota \lambda\alpha\beta\acute{\omega}\nu \tau\alpha\upsilon\tau\alpha$, there will usually be a presumption that this reading is the latest of the three, and is due to mixture.

777. The simplest application of genealogy in sifting readings is where it can be shown that, among the extant MSS. of an ancient text, one is the MS. from which all the rest have been derived. If there are twenty of these MSS., then nineteen have no independent value for the purpose of determining the original reading; since, wherever they vary from their parent, the twentieth MS., the variation must be due either to error or to conjecture. Thus it has been shown that one of the extant MSS. of Lysias, *Palatinus X*, is the parent of all the other extant copies (except those which contain only the spurious *Epitaphios*). But great caution is

Mode of tracing genealogy.

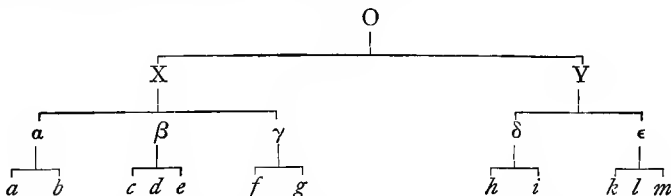
Mixture.

Case in which one extant MS. is the parent of all the rest.

necessary in examining the alleged proofs of such a relationship; a clear demonstration of it must be obtained before it is admitted. One extant ms. may be greatly superior to all the others. It may be a plausible theory that any sporadic good readings in the other mss. are merely felicitous conjectures; yet one or two minute facts may suffice to prove that those others are not all mere transcripts of the best ms.; and, if so, they retain their claim to be treated as independent witnesses. Thus some eminent critics at one time held that the Laurentian ms. of Sophocles (L) is the source of all the others: it is decidedly better than all the rest; all the greater corruptions of the text found in L are present in the rest; while, when some minor fault in L is corrected in one or more of the other documents, the correction usually appears to be such as might have been made by an intelligent grammarian or scribe. Yet there are some small pieces of evidence which refute that opinion. It will suffice here, for the purpose of illustration, to notice one of them. Verse 800 of the *Oedipus Tyrannus* is absent from the text of L (written in the first half of the eleventh century), and has been added in the margin by a later hand, which experts refer to the end of the thirteenth or the early part of the fourteenth century. But this verse stands in the text of all the other mss., including at least one (Vat. a) which belongs to the late twelfth or early thirteenth century, and which therefore cannot have derived the verse from L.

778. Suppose, again, that there are a dozen extant mss. of a text, *a, b, c, d, e, f, g, h, i, k, l, m*. A comparison of their readings shows that they may be divided into two sets or 'families,' one consisting (say) of the seven *abcdefg*, and the other of the five *hiklm*. The seven are descended from one lost ms., X; the five, from one lost ms., Y. A further scrutiny shows that the family of seven falls again into three smaller sets, *ab, cde, fg*; these smaller sets being derived respectively from three lost mss., α, β, γ , descendants of X. Similarly the family of five falls into two smaller sets, *hi* and *klm*, derived respectively from two lost mss., δ, ϵ , descendants of Y. We will suppose, further, that there is no evidence of *mixture*, either between the families descended from X and Y respectively, or between the smaller sets within either family. The stemma will then stand as follows, O being the lost archetype from which X and Y are derived:—

Partial reconstruction of a lost archetype.



(1) A reading in which all the twelve mss. agree must have been that of O. (2) If all the seven descendants of X have one reading, and

all the five of Y have another, then the genealogical evidence does not enable us to decide which was the reading of O. The fact that seven MSS. are arrayed on one side, and only five on the other, is immaterial; so also is the fact that on one side there is a consent between three smaller sets, and on the other side a consent between two only; since each larger family comes from a single ancestor. (3) Next, let us suppose that the descendants of X (or of Y) are divided among themselves. The representatives of γ (f and g) are found dissenting from those of α and β (ab , cde), and agreeing with the representatives of δ (hi) and ϵ (klm). Is the reading of X to be inferred from the representatives of α and β , or from those of γ ? The answer is, from those of γ : because (excluding the hypothesis of mixture or of accidental coincidence) the agreement of γ with δ and ϵ can be explained only by supposing that γ has preserved the reading common to X and Y, which was also, therefore, the reading of O. The readings of $abcde$ (representatives of α and β) may then be left aside. The advantage of the genealogical method in such a case is twofold: (i) the work is simplified by the elimination of certain variants; and (ii) it becomes possible to infer some readings of O besides those in which all its descendants agree.

779. But it may happen that the genealogical relations between MSS. are too obscure to afford ground for the application of such a method. This may occur through complex mixture between different lines of transmission. In such a case there may be another resource, of a kind intermediate between the evidence derived from the known character of a single document, and the genealogical evidence of families. Suppose that there are five MSS., A, B, C, D, E. The history of their lineage is not clear: we cannot say (*e.g.*) that ABC form one family, descended from one common ancestor, while DE form another. A comparison shows, however, that certain good readings are common to the group ABC, but are not found in D and E. This indicates that, so far as those readings are concerned, some good MS. was one element of ancestry common to A, B and C; though that ancestry may in other respects be diverse or mixed, and though, in regard to the great bulk of the text, neither A, nor B, nor C may have much claim to trust. Here there is an application, indeed, of the genealogical principle that identity of reading implies identity of origin. But the application is limited in such a way that the resulting evidence is not properly genealogical. It is merely the internal evidence of documents; collected, however, not from documents taken singly, but from groups of them.

The authority of a manuscript depends on pure descent from a good ancestry. In a conflict of manuscript testimony, the mere number of MSS. on either side proves nothing: this is obvious. But it is perhaps easier to forget that the age of a MS. does not necessarily prove anything. Suppose, for example, that a manuscript, A, was copied in the eleventh century from

Inconclusiveness (a) of mere number, and (b) of age.

a good archetype; A is now lost, but we have a copy of it, *a*, made in the fifteenth century. Another MS., B, was copied in the eleventh century from a corrupt archetype, and is extant. The fifteenth century *a* will be of higher authority than the eleventh century B.

780. The testimony of the MSS. can occasionally be supplemented from other ancient sources. (1) Quotations in ancient writers furnish one of these sources: *e.g.* the citations of Dionysius of Halicarnassus from Thucydides and the orators must be counted among the witnesses for the text of the passages quoted. The critical use of such aid is subject, however, to certain considerations. (i) When an ancient writer quotes only a few words or sentences from an older prose-writer, or a verse or two from a poet, it would appear that such quotations were often made from memory, and were sometimes inaccurate; it cannot be doubted that such is the case (*e.g.*) in regard to some of the quotations made by Aristotle from Tragedy. (ii) The longer citations, such as those of Dionysius from prose-writers, were doubtless, as a rule, transcribed by the quoting writer from his texts. But it would not always be safe to assume that the text of his citation, as it has come to us, is precisely that which he wrote out. Thus Dionysius, in his essay on Thucydides (c. 26), quotes a famous passage of some length from book VI. (c. 69 § 4—72 § 1). A later transcriber of Dionysius, when he came to that citation, may have turned to a contemporary text of Thucydides, compared the citation with it, and made some corrections. The general presumption may be, more or less, against such an occurrence; but it is a possibility which has to be borne in mind.

Documents
in supplement
of MSS.
(1) Ancient
quotations.

(2) The older Greek scholia, dating from the Alexandrian age, are commentaries, or fragments of such, made on texts which, in some cases at least, must have been purer than those of our MSS. Hence these scholia sometimes preserve, or indicate, true readings which our MSS. have lost. Thus in the *Philoctetes*, v. 954, our MSS. have ἀὶ θανόῦμαι: a scholium preserves the true reading, though only as a variant; γρ. ἀθανόῦμαι. Again, in the *Antigone*, v. 117, our MSS. have the corrupt φονίασιν: the scholiast does not, indeed, mention the true reading (φονόσαισιν), but he clearly indicates it by his paraphrase, ταῖς τῶν φόνων ἐρώσαις λόγχοις. The older Homeric scholia, on the *Iliad* especially, are the chief sources of what we know as to the readings of Aristarchus and other Alexandrian critics. The worth of the scholia varies much in relation to different authors; but there is scarcely any classical Greek writer of the first rank, in prose or in verse, on whose text, where it is corrupt, some light may not occasionally be gained from the older scholia. The later scholia, written chiefly by grammarians of the Byzantine age, seldom have any value for textual criticism. It may be added that, in using scholia, there are certain warnings which it

(2) Scholia.

is well to remember. (i) The paraphrases by which the scholiasts interpret difficult words in the text are often loose, and sometimes very inaccurate. Such a paraphrase may seem to suggest that the reading in the text, on which the scholiast was commenting, varied from the reading (or readings) of our mss. But great caution should be used in drawing such an inference. Before assuming an old variant, we must feel quite sure that the scholiast's paraphrase could not possibly be intended to represent the general sense (as he took it) of our text. (ii) Similar caution should be observed in concluding from a scholiast's language that his text was more concise than ours, because his paraphrase seems to ignore something which we read. Interpolations have often been rashly assumed on this ground. (iii) The word or words, taken from the text, which form the *λήμμα* ('lemma') of the scholium may not always be precisely the words which stood in the text as the scholiast had it: they may have been adjusted to a variant text by a later transcriber of the scholium.

(3) Old translations sometimes come into account as witnesses where a reading is doubtful. Thus in Cicero's version (*Tuscul.* 2. 8) of a passage in the *Trachiniae* (vv. 1046—1102), the first verse, *O multa dictu gravia, perpessu aspera*, shows that his text of that verse was the same as that of our mss., ὦ πολλὰ δὴ καὶ θερμὰ καὶ λόγῳ κακὰ: though it is probable that the second καὶ was originally κοῦ. As a general rule, however, the translations from the Greek classics made by ancient Latin writers are not sufficiently close to be of much service for textual criticism. The Latin versions made in the period of the Renaissance, being as a rule more literal, are more useful for that purpose, though (as might have been expected) they seldom presuppose a text better than that of our mss. Thus the Latin translation of Thucydides made in the fifteenth century by Laurentius Valla is commonly cited as one of the witnesses for the text. In vii. 16 § 2, for instance, all our better mss. have εἴκοσι τάλαντα ἀργυρίου, a sum which the context shows to be much too small: Diodorus xiii. 8 makes it '140' talents. But Valla has *centum viginti*, and so is an authority for adding the words καὶ ἑκατὸν after εἴκοσι.

781. The best and oldest of our classical mss. exhibit many errors and defects which must already have existed in their archetypal types. Such faults are anterior in their origin to any documents which we possess or can reconstruct: many of them

Errors anterior to our documents.

probably date from a time very near to that at which the autograph was written. The recently-found papyrus of Bacchylides is of eminent rank, in respect to antiquity, among extant mss. of the Greek classics: it is presumably of the first century B.C.: but, when it was written, Bacchylides had been dead for some four hundred years; and though the ms. is, on the whole, of a good class, the text already abounds in mistakes and corruptions.

782. It has sometimes occurred that a primitive error in the MSS. has been happily corrected by a transcriber, whose correction has displaced the traditional reading in one or more of the MSS. Suppose, *e.g.*, that we find two variants, *κλῆρον* and *καιρόν*. Genealogical evidence may prove conclusively that *κλῆρον* was the reading of a lost ancestor from which all our MSS. are descended. But it may be equally plain that *κλῆρον* is not right; the word may be decisively condemned by its intrinsic unfitness. Transcriptional probability, on the other hand, points to *καιρόν* having arisen from *κλῆρον*: and yet intrinsic probability strongly favours *καιρόν*: it suits the context so exactly that it is presumably the true reading. In such a case we infer that *καιρόν* is a successful emendation (whether conscious or unconscious) by a transcriber.

Emendation
traceable in
MSS.

783. If the only reading, or each of several readings, which our documents supply is seen to be impossible, then the remaining resource is conjectural emendation. Before a conjecture can be regarded as even probable, it must satisfy the two primary tests which we apply to doubtful readings of MSS.: (1) it must be intrinsically suitable: (2) it must be such as to account for the corrupt reading or readings in the transmitted text. There is, however, one important difference between the method of applying these tests to a conjectural emendation, and that of applying them to variants in MSS. We accept the variant which best satisfies the tests; but we require that the conjectural emendation shall satisfy them absolutely well. The conjecture does not rise from probability to certainty, or approximate certainty, unless its fitness is exact and perfect. So far as the greater classical texts are concerned, most, if not all, of the self-evident corrections have long ago been made; and also, probably, a very large proportion of those which, though not self-evident, admit of demonstrative proof. The problems which remain for the textual critic must often be insoluble (without new data) under the conditions imposed upon him: *e.g.* he may possibly have hit upon a true emendation, and yet be unable to explain how the corruption arose; since we cannot account for all the impulses of scribes, or for the whole chapter of accidents which might befall MSS. in the course of centuries. The fault most often committed in the use of conjectural emendation has been to use it prematurely. Corruptions have frequently been assumed with singular levity,—as if, indeed, for the mere sake of exercising divinatorial art,—where a more thorough and sympathetic study of the author's language and thought would have shown that the text is sound. Textual criticism is never safe except in alliance with thorough interpretation. Another very common form of rash conjecture has consisted in suspecting interpolation wherever the text contains a word or phrase which, though unobjectionable, is not indispensable. There are probably few good writers, ancient or modern, whose text could not be grievously mutilated

Modern use
of conjecture.

by revising it on the assumption that the author never used a superfluous word.

784. When the materials for judgment on doubtful readings are set forth in an 'apparatus criticus' subjoined to a text, clearness and simplicity are consulted by omitting all needless details, such, *e.g.*, as mere mis-spellings or false accents (unless they have some special significance). A very short note may tell

much, if the characteristics and relationships of the principal mss. have been stated in the preface, with due explanation of the symbols employed. The following note, taken from C. Hude's critical edition of Thucydides (1890), will serve as an example: it is on the words in VII. 87 § 2, τῶν νεκρῶν ὁμοῦ ἐπ' ἀλλήλοις ξυννενημένων.

ξυννενημένων C (ut vid.) Eg₂ ξυνενημένων AF ξυνενη + μένων G ξυνενηγεμένων BMC₂

This note is to be read in the light of the editor's preface. The better mss. of Thucydides fall into two families, each descended from a single lost ancestor. One family consists of C, *Laurentianus*, of the early 10th century, and G, *Monacensis*, of the 13th century, which closely agrees with C, yet is not a mere transcript of it. The other family consists of A, *Italus* (now at Paris), of the 11th or 12th century; B, *Vaticanus*, of the 11th (very closely related to A); F, *Augustanus*, and E, *Palatinus*, both of the 11th, and less near to A than B is; E, indeed, often agrees with the mss. of the other family. M, *Britannicus* (in the British Museum), a ms. of the 11th century, shows 'mixture' of both families, and is full of corrections. We can now interpret the note just quoted. ξυννενημένων 'seems' to have been the original reading of C: the qualifying 'ut videtur' is added, because the second hand in that ms. (c₂), which changed it to ξυνενηγεμένων, has blurred what the first hand wrote. G, the other ms. of the same family, originally had ξυνενη + μένων (where + means that a letter has been erased); but the second hand, g₂, has added a second ν after ξυν-. Of the other family, one ms., E, has ξυννενημένων, and two others, AF, have ξυνενημένων. The agreement between members of both families makes it certain that the reading of the archetype from which the common ancestor of both families sprang was ξυννενημένων or ξυνενημένων: probably the former, to judge from the traces in C. But, at some early point at all events in the transmission, the loss of the second ν in ξυννενημένων led a transcriber to conjecture ξυνενηγεμένων, the reading of B and M, which a later hand has imported into C. Thus the reading ξυννενημένων, which is intrinsically far the better, is confirmed by genealogical evidence, and, in its mis-spelt form, also accounts for the variant ξυνενηγεμένων.

It is often possible to simplify the apparatus by using a single symbol for a whole group of mss. Thus Hude's note on the word ὄν in Thuc. VII. 66 § 3 runs thus:—

ὄν D et ex ci. P₅. ὄ ἦν L (del. e₂) ὄσον ἦν γρ. G₁, sed ltt. σου del. g.

Here 'L' denotes the consent of all the seven better mss., A, B, C, E, F, G, M. By 'D' is meant 'one or more of the inferior mss.' The first hand in each of the seven better mss. wrote the corrupt $\delta \eta \nu$: but in one of them, E, the second hand (e_2) struck the words out. The first hand in another (G_1) noted $\delta \sigma \nu \eta \nu$ as a variant ($\gamma\rho$); but another hand in G (g) changed $\delta \sigma \nu$ back into δ . The true reading, $\delta \nu$, occurs in D (probably through a scribe's conjecture), and was also conjectured by Aemilius Portus ('Ps.'), the author of a Latin version published in 1594.









785. Two principal causes may be assigned for the great progress made in recent times by textual criticism. The first cause has been the closer and deeper study of palaeography. Conclusion.

The second has been the application, aided by that study, of rational and thorough methods in examining the relationships of mss. to each other. Textual criticism has become an art, guided, within certain limits, by definite general principles. More often and more confidently than of old, it can challenge strict reasoning on its results. But we must not exaggerate the degree in which textual criticism can approach to the character of an exact science. Its technical aspects must not lead us to forget the more humane and literary elements which the work involves. If that work is to be good, it requires not only special knowledge and sound method, but also a power of entering into the ancient author's mind, a feeling for the shades of his expression, a capacity for weighing nicely-balanced probabilities, a tact which can guard rules of general validity from hardening into rigid formulas. For the subject-matter of textual criticism is the play of human thought and emotion in creating literature, and the subsequent play of human agency, or of chance, in defacing it.

The student may also consult Cobet, *Variae Lectiones* (Leyden), 2nd ed. 1873, and *Novae Lectiones* (Leyden), 1858; J. N. Madvig, *Adversaria Critica* (Copenhagen), 1871-3, esp. Book I. of Bibliography. Vol. 1.; and F. W. Hall, *Companion to Classical Texts* (Oxford), 1913.

VIII. 5. METRE.

Explanation of the musical signs used.



	is a note equal in length to 4,
	.....3,
	.....2,
	.....1½,
	.....1,
	.....½,
	is a <i>pause</i> equal in length to 2,
	.....1,

786. METRE, for the Greeks, was *music*. In their language, even as spoken, there was, as there is now for example in Italian, a tendency to discriminate syllables by extension, longer or shorter, in time. In poetry, which was *sung* or *chanted*, these lengths were made exactly proportional, and the metre or *measure* of the poetry is an account of the proportions used. Speaking generally, and for the classical age, nothing else was taken into account, neither the fixed stress in the several words (if they had such), nor the fixed differences of *pitch in pronunciation*, which were called *τόνοι* and marked by the 'accents.' The oldest Greek literary metre used only two lengths of note, one double of the other; and for this purpose the syllables of the language were discriminated as long (—) or short (∪). Afterwards other and more complicated proportions were used, to which the 'long' and 'short' syllables were adapted as best they might be.

787. Notes become music, and syllables metre, when they are arranged in groups symmetrical, that is, containing each the same number of units of time (*times*). The group, originally itself called the *μέτρον* or *measure*, was and is commonly called *foot*, *πούς*. Almost all Greek metres are divisible into feet either of 4 times or of 3 times, though in some the name *foot* is given to a fixed and recurrent combination of groups. In general such a combination is called a verse (*στίχος*). Where one and the same combination is repeated throughout, the metre is called *monostich*, where two, *distich*, etc. In singing or reciting it is natural to mark metrical divisions by a beat at the commencement of each; thus each foot consists of *beat* and *not-beat*, properly called *thesis* and *arsis*, but the terms are often reversed.

788. Prosody in general, the rules which determine what syllables in a word or sentence are 'long' or 'short,' adaptable to longer notes or shorter, we shall not here discuss, but assume. On the border between *prosody* and *metre* proper lies the topic of this paragraph. The Greeks tended, even in prose, to avoid and proscribe, between word and word, collisions of vowels (*hiatus*). Short vowels might stand before other vowels, but only on condition of being *elided* and not reckoned. To the perfectly continuous language of a musical verse the rule was naturally applied with much greater strictness. But primitive verse was comparatively lax, and also subjected the rule to this general reservation, that a *long* vowel-sound might collide with a following vowel so as to lose part of its length and be treated as short. The rule in this ancient form prevailed by tradition in what was originally the sole metre, the *dactylic hexameter* (see below), and in certain allied metres, principally the *anapaestic*. But in all metres a metrical break or pause of sufficient importance, by separating the words, abrogated the rule against hiatus: and *in general*, for this purpose, the pause between verse and verse was sufficient. The same pause could also generally be used to fill up the time of the verse if it ended with a 'short' syllable, the metre strictly requiring a 'long,' and thus this final syllable is ambiguous (*anceps*) in quantity, admitting either long or short.

Hiatus and
syllaba an-
ceps.

789. Down to about 700 B.C., or perhaps even 650, the only form of literary composition was the metre of the epics, the *dactylic hexameter*, which had a μέτρον, bar, or foot, of 4-times (*dactyl*, ) and a verse of six feet: in any of the six the two shorts of the thesis might be replaced by one long () though in the fifth this was comparatively rare: in the sixth it was obligatory, with the freedom of *syllaba anceps*. As any group of six has a natural tendency to subdivision in two groups of three, or three groups of two, care was taken to counteract this, and to preserve the unity of the hexameter, by arranging the words so that in general their divisions, and those of the sense, should *not* coincide with the places at which the metre or music was liable thus to break up. In particular, bisection after the third foot was prevented by the rule, that *the words* must have a break either (normally) just before this place (*i.e.* within the third foot) or just after it (*i.e.* within the fourth) thus:—

Hexameter,
Caesura,
Elegiacs,
Anacrusis.

	ὡς φάτο	δακρυχέ-ων,	||	τοῦδ' |	ἔκλυε	Φοῖβος Ἄ-	πόλλων,
or,	ὅς κε θε-	οῖς ἐπι-	|	πείθη-ται	||	μάλα τ' ἔκλυον	αὐτοῦ,
or,	τὸν δ' ὡς	οὖν ἐνό-ησεν	||	'Α-λέξαν-	δροσ θεο-	ειδής,	

where | marks the feet, and || the obligatory division of words, called *caesura* (τομή).—An early offshoot of this metre was the *elegiac couplet*, a distich formed of one ordinary hexameter followed by one (sometimes incorrectly called a pentameter) in which two feet, the third and the sixth, are composed each of a note (half-foot) and a pause (half-foot), thus:—

Ἴ-λί-ψ	αἰπει-	νῆ Πάρις	οὐ γάμον	ἀλλά τιν'	ἄ-την
ῆ-γα-γεν	Ἄργεί-	ην	ἔς θα-λά-	μους Ἑλέ-	νην

The second verse, in its latter half, does not admit the foot . Dactyls were also combined in many other ways; and to every variety of verse, dactylic or other, a second variety, actual or conceivable, may be added by prefixing a preliminary half-foot (*ἀνάκρουσις*).

790. With the *dactylic* measures were perhaps connected in origin the *Anapaests*. *anapaestic*, which however, though the feet have the same length and notes as the *dactylic*, is sharply distinguished by admitting and requiring the use of the foot in which the beat of the foot is represented by the short notes. This foot is called *anapaest*, *ἀνάπαιστος*. The rhythm is suitable for marching and may often be heard upon military drums. The most important literary use of it was to accompany the march-movements of the Chorus in drama. The commonest anapaestic composition is in *dimeters* (*i.e.* groups of four feet, the *μέτρον* or *measure* being in this case, as often, the *pair of feet*). From time to time the series (or *system*) of dimeters is closed by a verse with a final pause (*versus paroemiacus*), thus:—

ἀλλ' ἴθι χαίρων καὶ πράξειας
κατὰ νοῦν τὸν ἐμόν, καὶ σε φύλαττοι
Ζεὺς ἀγοραῖος, καὶ νικήσας
αὐθις ἐκεῖθεν πάλιν ὡς ἡμᾶς
ἔλθοις στεφάνοις κατάπαστος.

Sometimes however the system is not divisible into groups of four feet, but only into groups of two. Sometimes again there is an *anacrusis*, sometimes not; and in given words this may be doubtful. In the above specimen probably there is not, but it should be divided thus:

ἀλλ' ἴθι | χαίρων | καὶ πράξ-|ειας | κατὰ νοῦν |

and so on. The language of the system, in accordance with the general principles of Greek composition, is treated as one single verse of unbroken continuity (*συνάφεια*), and therefore *hiatus* and *syllaba anceps* are not admitted, except at the final pause. Each pair of feet should generally be marked off by word-division, and the composition should be such that the foot is nowhere followed by the foot —Another important form is the *anapaestic tetrameter*:

ἄγε δὴ φύσιν ἄνδρες ἀμαυρόβιοι, φύλλον γενεᾷ προσόμοιοι

(see Aristophanes *Birds*, 686 foll.), a verse or little system composed of the full dimeter + the *versus paroemiacus*.—Anapaestic measures with various licences (in particular the admission of the foot ~ ~ ~ ~) are also found in the lyric parts of Athenian drama.

791. The above are 4-time measures. Before passing to 3-time we should note that often the same words are susceptible either of 4-time or of 3-time. The syllables *τοῦδε* (-υ, a *trochee* or *choree*) may be sung as a foot of 3-time ($\text{♪} \text{♪} = \text{♪} \text{♪} \text{♪}$) or, by lengthening the first note, of 4-time ($\text{♪} \text{♪} = \text{♪} \text{♪} \text{♪} \text{♪}$). As a foot of 4-time it forms an important element in the *Doric rhythms* of the choric poets, for example Pindar, *Olymp.* 10,



A like ambiguity exists in many metres afterwards mentioned. Probably they were used with both times, according to the subject and occasion.

792. Measures of 3-time were first developed in literature by the song-writers of the sixth and fifth centuries B.C. The simplest forms are the pure *trochaic* (and *iambic*). *Trochaic* metre is composed of the foot $\text{♪} \text{♪}$ or equivalents for it, especially $\text{♪} \text{♪} \text{♪}$ and $\text{♪} \text{♪}$, e.g. Aeschylus, *Eumenides*, 497 foll.

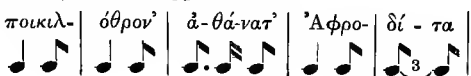
Trochee,
Iambus, Tro-
chaic dactyl
and spondee.



'*Iambic metre*' is, as commonly applied, a misnomer. Trochaic metres, like others, can commence with a half-foot, thus:—



In this case the ancient metrist counted, contrary to principle, by the iambus (υ-) and called the metre iambic. A most important development of 3-time measure was the adaptation to it of the syllables -υυ, by singing them either thus $\text{♪} \text{♪} \text{♪}$ or thus $\text{♪} \text{♪} \text{♪}$ (a *trochaic dactyl*) = $\text{♪} \text{♪} \text{♪}$, and of the syllables --, by dividing the space of 3 times between 2 equal notes thus, $\text{♪}_3 \text{♪}$ (a *trochaic spondee*) = $\text{♪} \text{♪} \text{♪}$. Both are seen (for example) in the *Sapphic* verse




The ancient term *logaoedic* metre, so far as it has any definite meaning, signifies 3-time verse in which the two feet here described occur commonly.

793. Out of these elements, combined in various verses and stanzas, were gradually formed a number of metres, of which it is

Variety of combinations.
Stanza.

impossible here even to catalogue the varieties now extant. The following specimens will serve just to indicate the range and diversity:—

τοῖος | γὰρ φιλό- | τητος ἔρ- | ως ὑπὸ | καρδί- | ην ἔ- | λυσθείς.
(Archilochus).

ἀσπίδα | ῥιψ- | ας ποταμ- | οὔ |
καλλιρό | ου παρ' | ὄχ- | θας. |
 (Anacreon).

μυρσί- | νου κλαδί | τὸ ξίφ- | ος φορ- | ῆσω. | (Athenian song):

hence (but with fundamental changes) came the *hendecasyllable* of the Romans: see Catullus I, and Martial I, i.

ὁ | μὲν θέ- | λων μάχ- | εσθαι, || πάρ- | εστι | γάρ, μαχ- | ἔσθω.
(Anacreon).

κά- γώ, | παρθέν- | ος γὰρ ἔτ' | ἦ, | κοῦκ ἔξ | ἦν πώ | μοι τεκ- | εἶν |
 (Aristophanes).

ἔξ - έθ- | η - κα | παις δ' ἑτέρ- | α | τας λαβ- | οῦσ' ἀν- | εἶλ - ετ- | ο

Of the manner in which verses were first combined in *lyrical stanzas* the best idea, since we have not the originals, can now be obtained through the Latin imitations of Horace in the *Odes* and *Epodes*.

794. Almost all Greek metres can be ultimately analysed into the elements above noticed. But the character of a particular

Typical combinations:
Choriambus,
Bacchius,
Cretic, Paeon.

metre may depend upon the recurrence of a fixed combination, and some of the most common and effective combinations are conveniently distinguished by special names. Thus

the combination  | , or in 4-time  | 

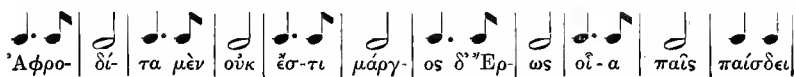
is called a *choriambus* (choree — ◡ + iambus ◡ —), and metres, in which it prevails, *choriambic*. An arrangement like this,



etc., produces a series of combinations ◡ — —, e.g.

προσείπεν δ' Ὀρέστης Δάκκωναν κόραν' ὦ Διὸς παῖ, κ.τ.λ.

The combination was called a *bacchius*, and the metre *bacchiac*. The following is *cretic* (4-time)



because made up of the combination $\cup\cup$ (*creticus*). In this



the second verse would have been called *paemonic*, because apparently exhibiting the combination $\cup\cup\cup$ (*paeon*). Cretic and Paemonic measures are freely used in Attic Comedy (e.g. Aristoph. *Ach.* 974, *Pax* 347, *Vesp.* 413, *Lysistrata* 781). But many of these ancient names are more misleading than useful.

795. The verse

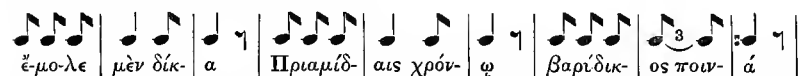


Glycionic,
'Basis,'
Dochmiac.

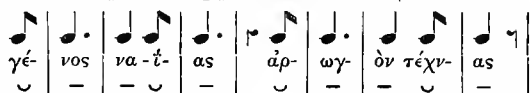
was known (with some others similar) as *Glycionic*. Stanzas formed of it had commonly for close the verse (*Pherecratean*)




See for a poem in such stanzas Catullus 61. In similar verse are composed many Chorus-songs in Tragedy, e.g. Soph. *Oed. Col.* 668 foll., Eurip. *Herc. Fur.* 348 foll. The metre, and other *logaedic* metres (see above), exhibits the peculiarity that the quantities of the first foot in the verse *appear* to be treated as indifferent, so that not only the regular equivalents of the *trochee* are found there, but also the *iambus* ($\cup-$). This apparently variable first foot is sometimes called the *basis*.—The *dochmiac* metre will be produced, if a series of 3-time feet be broken into groups by a pause in every third foot, thus



The group of three 'feet' is the *dochmius* or dochmiac foot. The primitive form, the *dochmius* proper, is supposed to be this (with *anacrusis*)



But this metre is singularly varied, and almost all variations occur which are consistent with the general plan. It has a peculiarly stirring effect: see e.g. Eurip. *Medea* 1258, Aristoph. *Birds* 1188.

796. One of the very few metres of which the elements are neither *dactylic* nor *trochaic* is the slow 3-timed, or rather 6-timed, Ionic, verse called *Ionic*, having the foot ; thus



It is not common, but see the opening Chorus of Aeschylus' *Persae*.

797. But more productive than any lyrical forms were the metres for recitation formed from the *trochee* (and *iambus*) as nearest to the rhythm of ordinary speech. In primitive Athenian drama, before 'speech' was sharply separated from song and dance, the dialogue was mainly composed in the *trochaic tetrameter*, i.e. a verse of 8 trochees, 4 'metres' or double-feet, of which the last was completed by a pause:

Recitation,
Trochaic
Tetrameter,
'Iambic
trimeter.'



For rapid and animated passages it retained a place in the Comedy and Tragedy of the fifth century (see e.g. Aristoph. *Pax* 301, 613, Eurip. *Bacchae* 602, *Orestes* 728), but for ordinary dialogue it was replaced by the so-called '*iambic*' trimeter, *hexapody*, *senarius*, the most fertile and important of Greek metres and the best known to us. The normal type is



Certain variations, chiefly the substitution of $\cup\cup$ for $-$ in the 1st, 2nd, 3rd or 4th foot (excluding the *anacrusis*) are allowed sparingly in Tragedy; these and others in Comedy. *Caesura* is used as in the *dactylic hexameter* (see above § 789) to preserve the unity of the verse and prevent it from falling into a distich like $\xi\beta\eta\nu\ \mu\acute{\epsilon}\nu\ \epsilon\iota\varsigma\ \acute{\alpha}\gamma\rho\acute{\nu}\nu\ \|\ \sigma\acute{\upsilon}\ \delta'\ \eta\lambda\theta\epsilon\varsigma\ \epsilon\iota\varsigma\ \delta\acute{\omicron}\mu\omicron\nu\varsigma$. Division of language or words must occur (normally) either just before the point of danger ($\alpha\iota\chi\mu\alpha\lambda\acute{\omega}\tau\omicron\iota\varsigma\ \|\ \tau\rho\omega\iota\kappa\acute{\omicron}\iota\varsigma$), or just after it ($\theta\alpha\nu\acute{\omicron}\nu\tau\epsilon\varsigma\ \|\ \acute{\alpha}\lambda\lambda'\ \acute{\iota}\theta'$). In tragedy, a delicate rule (*law of the cretic pause*) prescribes that, when the verse ends with a cretic ($-\cup-$) word or phrase ($\pi\eta\mu\acute{\alpha}\tau\omega\nu$ or $\tau\acute{\omega}\nu\ \sigma\omicron\phi\acute{\omega}\nu$), the preceding syllable, *if long*, must be connected in sense with the cretic. Thus $\tau\acute{\alpha}\ \delta\epsilon\iota\nu\acute{\alpha}\ \gamma\acute{\alpha}\rho\ \tau\acute{\alpha}\delta'\ \acute{\epsilon}\xi\acute{\epsilon}\beta\eta\ \tau\acute{\omega}\nu\ \pi\eta\mu\acute{\alpha}\tau\omega\nu$ is correct, and so is $\acute{\epsilon}\kappa\beta\acute{\epsilon}\beta\eta\kappa\epsilon\ \pi\eta\mu\acute{\alpha}\tau\omega\nu$; but $\acute{\epsilon}\xi\acute{\epsilon}\beta\eta\ \mu\omicron\iota\ \pi\eta\mu\acute{\alpha}\tau\omega\nu$ would be lax, and $\acute{\epsilon}\kappa\beta\acute{\epsilon}\beta\eta\kappa\epsilon\nu\ \pi\eta\mu\acute{\alpha}\tau\omega\nu$ is inadmissible. For further details and practical hints see Sidgwick and Morice, *Introduction to Greek Verse Composition*.

798. *Choric* metre differs neither in material nor in principle from other metre. The characteristic of it is the *pairing of stanzas*, as accompaniment to the symmetrical movements of a dance

Chorus,
Strophe.

(*strophe* and *antistrophe*). It must suffice to give one simple specimen, with the (probable) notes and divisions (Eurip. *Medea* 990),

σὺ δ' ὦ πάλαν, ὦ κα-κό- νυμ-φε || κηδεμ- ὦν τυρ- ἀνν- ὦν, |

 παι-σὶν οὐ κατ- εἰδ- ὡς

 ὀλεθρ- ὦν βι-στ- ᾧ προσάγ- εἰς ἀλόχ- ῶ τε || σᾶ στρυγερ- ὦν θάνατ- ὦν. |

 δύστ- αν-ε μοίρ- ας ὄσ- ὦν παρ- οίχ- ε |

a stanza in 3-time, with divisions in which (apart from disputable points) we can easily perceive a general harmony of proportion. The *antistrophe* (v. 996) echoes it note for note. *Strophic* correspondence was however sometimes satisfied with an equality of bars or feet.

799. The problem, inferring from given words the accompanying music, does not always admit a certain solution. Many groups of words allow more than one natural setting. The familiar Ambiguities. verse $\cup \ominus | \cup \cup \cup | \cup \ominus$ (see above § 795) commonly bears the name of Pherecrates (Attic comedian, fifth century) who was supposed to have called attention to it, as a novelty, in the lines *ἄνδρες, πρόσχετε τὸν νοῦν | ἐξευρήματι καιῶν | συμπύκτοις ἀναπαίστοις*. But verses in the 'Pherecratean' rhythm are not 'anapaests' at all; nor was such a rhythm new at his date. Pherecrates apparently set his words on this occasion quite differently, as *anapaests*, i.e. in 4-time, perhaps thus:—

ἄν-	δρες, πρόσ-	σχετε τὸν	νοῦν
ἔξ-	ευρ ἡμ-	ατι καιν-	ῶ
συμ-	πύκτοις	ἀναπαίστ-	οἰς

and so on, adapting them to a novel dance. The *σύμπυξις* is the characteristic 'folding-up' (if we regard the *words*) of the first and fourth feet into a single syllable. Such ambiguities, when the music to be recovered is that of a long and complicated piece, are naturally numerous.

J. H. Heinrich Schmidt, *Die Kunstformen der griechischen Poesie*, 1868-72 (out of print): part of this translated in an abbreviated form appeared as *An Introduction to the Rhythmic and Metric of the Classical Languages*, 1879 (also out of print). Bibliography. L. Havet, *Cours élémentaire de métrique grecque et latine* (4th edition, edited by L. Duvau, 1896); H. Gleditsch, *Metrik der Griechen u. Römer* (Iwan v. Müller's *Handbuch*, II. 3), 1901. Walter Headlam, *Chorus of Greek Tragedy* (*J.H.S.*, vol. XXII. 1902); J. Williams White, *The Verse of Greek Comedy*, 1912.

VIII. 6. HISTORY OF SCHOLARSHIP.

800. THE History of Greek Scholarship falls into five periods, (1) the *Alexandrian*, c. 300—1 B.C., (2) the *Graeco-Roman*, c. A.D. 1—330, (3) the *Byzantine*, from the founding of Constantinople in A.D. 330 to c. 1350, (4) the *Italian Renaissance*, from c. 1350 to the death of Leo X in 1521, (5) the *Modern* period, including the subsequent history of scholarship in Italy, and in France, the Netherlands, England and Germany, and extending to the present day.

801. Greek Scholarship was fostered in Alexandria under the rule of the earlier Ptolemies. Under Ptolemy Soter, Demetrius of Phalerum gave the first impulse towards the formation of public libraries in the capital of Egypt (c. 295). Under Ptolemy Philadelphus (285—247), learning found a home in the Museum and in the Libraries of Alexandria. The Museum and the larger Library was in the royal quarter NE of the city, while the smaller Library was in the SW quarter, near the Serapeum. The first six Librarians were Zenodotus, Apollonius Rhodius, Eratosthenes, Aristophanes of Byzantium, Apollonius the 'Classifier,' and Aristarchus.

Zenodotus, the pupil of Philetas of Cos (300), compiled a Homeric glossary and shortly before 274 produced the first scientific edition of the *Iliad* and *Odyssey*. In this edition, which was founded on numerous MSS., each of the two poems may perhaps have been divided into 24 books; spurious lines marked by a marginal obelus. It was succeeded by a recension executed with taste and judgment by the epic poet, Rhianus. As Librarian, Zenodotus classified the epic and lyric poets, while Alexander Aetolus dealt with the tragic, and Lycophron with the comic poets (c. 285).

It is sometimes supposed that the successor of Zenodotus as Librarian was the poet Callimachus (*fl.* 260). He certainly produced a classified catalogue, in which the authors were arranged under the heads of dramatists, epic and lyric poets, legislators, philosophers, historians, orators and rhetoricians, and miscellaneous writers, with a brief biography of each author, and, in the case of plays, the date of their production. To the school of Callimachus belonged Eratosthenes, Aristophanes of Byzantium and Apollonius, the author of the *Argonautica*, whose rivalry with Callimachus at last compelled him to leave Alexandria and settle in Rhodes (c. 260). He accordingly became known as Apollonius *Rhodius*. He succeeded Zenodotus as Librarian.

Eratosthenes, the successor of Apollonius Rhodius, was a man of vast and varied learning. He was the founder of astronomical geography and of scientific chronology, and was the first to assume the name of *φιλόλογος*. A work on the Old Attic Comedy was regarded as his philological masterpiece.

Eratosthenes was succeeded (195) by the greatest philologist of antiquity, Aristophanes of Byzantium, the first of the Librarians who was not a poet as well as a scholar. He reduced accentuation and punctuation to a definite system. He also added to the obelus a variety of critical symbols, which he used in his recension of the *Iliad* and *Odyssey*. He further edited Hesiod's *Theogony*, Pindar, Euripides and Aristophanes; established a scientific system of lexicography; wrote on grammatical 'analogy,' as contrasted with 'anomaly'; drew up lists of the 'best authors'; and composed introductions to the dramatists, excerpts from which are still extant. He died in 180 B.C.

Aristophanes
of Byzantium.

He was succeeded, as Librarian, by Apollonius, 'the Classifier,' whose successor Aristarchus, in the form of commentaries alone, wrote 800 volumes, apart from special critical treatises. His extensive learning embraced history and geography, mythology and chronology. Besides commentaries on the early Greek poets, he produced two critical editions of the *Iliad* and *Odyssey*. He placed the study of grammar on a sound basis, and was the founder of scientific scholarship. The date of his death is *c.* 144 B.C.

Aristarchus.

Among his numerous pupils was Apollodorus of Athens and of Pergamum (*fl.* 140 B.C.), the author of a work on Chronology beginning with the fall of Troy and ending in 119 B.C., and also of 24 books on Mythology, the substance of which was borrowed freely by later writers. Between 100 and 50 B.C. appeared the first Manual of Mythology, the lost work of an unnamed author, which was largely used by Diodorus and Hyginus and in the extant 'Bibliotheca' of Pseudo-Apollodorus.

Apollodorus.

The tradition of Aristarchus was maintained at Alexandria by his pupil Ammonius (*c.* 145), and (*c.* 30 B.C.) by Tryphon, who was celebrated as a specialist in Greek Grammar. A distinguished pupil of Aristarchus, Dionysius Thrax (born *c.* 166 B.C.), was the author of a work on Grammar, which remained the standard text-book for more than 1300 years.

Ammonius.

Dionysius
Thrax.

The most versatile and most industrious of all the successors of Aristarchus was Didymus Chalcenterus (*c.* 65 B.C.—A.D. 10), who taught at Alexandria and perhaps also at Rome. He was reputed to have written some 3500 volumes, including works on lexicography which were the source of much of the learning of later ages. In his work on Homer, probably preceded by that of Aristonicus, he aimed at restoring the lost recension of Aristarchus, and considerable fragments of his restoration are still extant. He also commented on Hesiod, Pindar and Bacchylides; on Eupolis, Cratinus and Aristophanes; and on Thucydides and the Attic Orators. The age of original commentaries was already over; and it was reserved for Didymus to sift the remains of the past and to preserve all that was worth preserving for the future.

Didymus.

Grammar had meanwhile been studied by the Stoics, as a necessary part of a complete system of dialectic. Chrysippus (c. 280—c. 206), besides other grammatical works, wrote on ‘anomaly,’ being the first to use that term in a grammatical sense. ‘Anomaly,’ as opposed to ‘analogy,’ was also maintained as a leading principle in grammar by the Pergamene Librarian, Crates of Mallos, who in this, and also in the allegorical treatment of Homer, was opposed to his great contemporary, Aristarchus. He was probably responsible for drawing up the classified lists of authors in the Pergamene library, founded by Eumenes II (197—159 B.C.), in which the leading writers of prose, especially the orators and the critics of Art, had a prominent place, just as the poets had in the lists of the Alexandrine librarians. His accidental detention as an envoy in Rome shortly after the death of Ennius (169 B.C.) led to his inspiring the Romans with an interest in the study of Literature.

Towards the close of the Alexandrian period, the contents of the larger library at Alexandria are said to have been destroyed by fire while Caesar was being blockaded in the royal quarter of the city in 47 B.C. If so, it was in partial compensation for this loss that Antonius presented Cleopatra with the library of the Pergamene princes.

802. The Graeco-Roman period begins with the name of Dionysius of

Halicarnassus, who lived at Rome for at least 22 years, from B.C. 30 to B.C. 8. We are here concerned with his rhetorical writings alone. They may be arranged in chronological order as follows:—(1) *The First Letter to Ammaeus*, valuable in connexion with the history and criticism of the public speeches of Demosthenes; (2) *De Compositione Verborum*,

Graeco-Roman period.

Dionysius of Halicarnassus.

on the different kinds of oratorical prose; (3) *De Oratoribus Antiquis*, on the styles of Lysias, Isocrates and Isaeus, and (later) on Demosthenes and Dinarchus; (4) *The Epistola ad Pompeium*, with strictures on Plato; (5) Three books *De Imitatione*, surviving in fragments only; (6) The treatise *De Thucydide*, with a severe criticism on his style; and (7) *The Second Letter to Ammaeus*, a fuller exposition of c. 24 of (6). The *Arts Rhetorica* bearing his name belongs to the age of the Antonines. Among the Greek writers later than Aristotle, he is a leading representative of aesthetic criticism. In a degenerate age he aims at reviving a true standard of Attic prose; and, in pursuit of that aim, tries the extant speeches of the Attic orators by the test of a strictly critical inquiry. In such inquiries his name is associated with that of his friend Caecilius of

Caecilius of Calacte.

Calacte (a pupil of the Pergamene rhetorician, Apollodorus), who wrote on the characteristics of the ‘Ten Orators,’ and on other rhetorical subjects. His lost treatise *περὶ ὑψους* (‘on elevation of style’) is mentioned by the author of the extant treatise of perhaps the first cent. A.D., bearing the same name and erroneously ascribed to ‘Dionysius or Longinus.’ The object

Anon. περὶ ὑψους.

of the extant work is to point out the essential elements of an impressive style which, avoiding all tumidity, puerility, affectation and bad taste, finds its inspiration in grandeur of thought and intensity of feeling, and its expression in nobility of diction and in skilfully ordered composition.

In the next century, Apollonius Dyscolus (c. A.D. 130) was the founder of scientific Syntax; his four books on Syntax are still extant, besides other grammatical works. In the opinion of Priscian, he is 'grammaticorum princeps,' and shares with his son the distinction of being 'maximus auctor artis grammaticae.' His definitions of the parts of speech show a marked advance on those of his predecessors and are adopted by Priscian and by subsequent grammarians. His son Aelius Herodianus (fl. c. A.D. 160) was one of the most celebrated grammarians of antiquity. His great work on Prosody, and many of his other grammatical writings, are only known to us through excerpts in later authorities, but his book on peculiar or anomalous forms (*περὶ μονήρους λέξεως*) is still extant.

Apollonius
Dyscolus.

Herodian.

803. Among the early lexicographers and compilers of collectanea may be mentioned Juba II, king of Mauretania (fl. 25 B.C.), the author of a work on the stage accepted as an authority by Athenaeus and Pollux; Pamphilus (1st cent. A.D.) the compiler of a vast work *περὶ γλωσσῶν*, abridged by later writers and then lost; Herennius Philon of Byblus (A.D. 64—141), author of a work on cities and their celebrities, used by subsequent lexicographers; Hephæstion, whose 48 books on metre have only survived in an epitomised form in his own *ἐγχειρίδιον*; his younger contemporary, Athenaeus of Naucratis (A.D. 190), who in the varied contents of the 15 books of his extant work quotes at least 700 authors who would otherwise have been unknown to us; the Atticists, Aelius Dionysius (fl. A.D. 117), Pausanias (c. 160, not the traveller), Moeris and Phrynichus; Harpocration (2nd cent. ?), the lexicographer of the Attic Orators; and Pollux of Naucratis (fl. 180), the author of an *ὀνομαστικὸν* of Attic words and phrases, arranged according to subjects. Among rhetoricians we have Hermogenes of Tarsus (A.D. 170), the author of an important text-book, and Cassius Longinus (ob. A.D. 273), whose *Rhetoric* is imbedded in that of Apsines, and who was the pupil of Plotinus, the preceptor of Porphyry and the minister of Queen Zenobia at Palmyra.

Early lexico-
graphers, etc.

804. In the Byzantine period our first name is that of the rhetorician Libanius (c. A.D. 314—c. 393), who taught at Athens, Constantinople and Antioch, and is the author of numerous works in imitation of Demosthenes, together with a Life of that orator and Arguments to his speeches. The name of Hesychius is borne by two lexicographers, (1) Hesychius of Alexandria (probably cent. 5, A.D.), the compiler of an extant Greek lexicon founded on a lost work by Diogenianus (fl. A.D. 117); (2) Hesychius of Miletus (cent. 6), the author of a list of persons famous

Byzantine
period.

Libanius.

Hesychius.

for learning, a work derived in part from Aelius Dionysius and Herennius Philon, and surviving only in excerpts. The geographical lexicon of Stephanus of Byzantium (*c.* A.D. 500), originally in 60 books, exists in the form of an abstract drawn up by Hermolaus (*fl.* 527—65).

Choice passages from many writers have been preserved in the Byzantine *Florilegia*, the earliest of which is the Anthology of Stobaeus (*c.* 480), including selections from more than 500 writers. Similar service has been rendered to scholarship in the *Bibliotheca* or *Myriobiblon* of Photius (*c.* A.D. 820—891), giving an account of 280 volumes, and preserving fragments of Hecataeus, Ctesias, Theopompus, Diodorus and Arrian. Another work of Photius connected with Greek scholarship is his *Lexicon*, the only ms. of which, the *codex Galeanus*, now in the Library of Trinity College, Cambridge, was twice transcribed by Porson and published by Dobree. Among the pupils of Photius who was Patriarch of Constantinople was Arethas, Archbishop of Caesarea. One of the important mss. copied under the orders of the latter was the Patmos ms. of Plato, now in the Bodleian (A.D. 895).

In the tenth century the emperor Constantine Porphyrogenitus (A.D. 912—959), besides composing independent works, caused an Encyclopaedia of History to be drawn up, in which many extracts from earlier historians (esp. Polybius) have been preserved. To the same age we may ascribe the Greek Anthology compiled by Constantine Cephalas (*fl.* 917) and preserved in the *Anthologia Palatina*. In the last quarter of the same century (*c.* 976) we may place the Lexicon of Suidas (*Σουίδας*), which is a combination of a lexicon and an encyclopaedia, the best articles being those on the history of literature. It is founded on earlier lexicons and on scholia; also on the historians, and on biographical material collected by Hesychius of Miletus and by Athenaeus.

In the eleventh century the most notable name is that of Psellus (1018—1078), a scholar of varied attainments who lectured on Homer and on Plato, and whose voluminous writings include not only a history of A.D. 976—1077, but also a poem on Greek dialects, a brief description of the surroundings of Athens and a list of Athenian forensic phrases containing an extract from Aristotle's *Constitution of Athens*, c. 21 § 4.

To the twelfth century, and to a revival of the influence of Photius, we may ascribe the principal part of the lexicon which its first editor printed with many interpolations in 1499 under the name of the *Etymologicum Magnum*.

The same century is also marked by the name of Tzetzes (*c.* 1110—*c.* 1180), the author of the *Chiliades*, a didactic poem on literary and historical topics extending over 12,674 lines of accentual verse and displaying a vast amount of miscellaneous reading. Among his other works are allegories on the *Iliad* and *Odyssey* in 10,000

lines, hexameter poems on *Antehomerica*, *Homerica* and *Posthomerica*, and scholia on Hesiod and Aristophanes. He is proud of his rapid pen and his remarkable memory, but he is for the most part dull as a writer and untrustworthy as an authority.

A far more memorable name in the same century is that of Eustathius, whose philological studies at Constantinople precede his tenure of the archbishopric of Thessalonica from 1175 to *c.* 1192. Of his *Commentary on Pindar* the only part preserved is a valuable preface on lyrical and Pindaric poetry, on the poet's life, and on the Olympic games and the pentathlon. His next work was on *Dionysius Periegetes*, followed by his extant *Commentary on the Iliad and Odyssey*. That on the *Iliad* is twice as long as that on the *Odyssey*; both are preceded by literary introductions, and include many excerpts from earlier writers. Another learned ecclesiastic was Gregorius, archbishop of Corinth (*c.* 1200), author of an extant work on Greek dialects.

The scholars of the age of the Palaeologi (A.D. 1261—1453) have less in common with Photius and Eustathius than with the humanists of the Italian renaissance. Thus, Maximus Planudes (*c.* 1260—1310) was familiar with Latin, and besides many other works, paraphrased 'Aesop' in Greek prose, compiled historical and geographical excerpts, often of importance for textual purposes, and by abridging and rearranging the Anthology of Constantine Cephalas (*fl.* 917), formed the collection of Greek epigrams known as the *Anthologia Planudea*. His pupil Manuel Moschopoulos (*fl.* 1300) is best known as the author of a catechism of Greek Grammar which successively formed the foundation of the Grammars of Theodorus Gaza, Constantine Lascaris and Melanchthon. Among his contemporaries were Thomas Magister, author of an extant 'Selection of Attic nouns and verbs,' and Theodorus Metochites (*ob.* 1332), one of the most learned men of his age, whose excerpts from more than 70 philosophers and historians are often of textual importance.

The foremost textual critic of the later Byzantine age was Demetrius Triclinius (early in the 14th cent.). He had considerable knowledge of metre, and he expounded and emended and not unfrequently corrupted the texts of Hesiod, Pindar, Aeschylus, Sophocles, Euripides (three plays) and Theocritus. His Scholia on Aeschylus and Hesiod (*c.* 1316—1320) still exist in his own handwriting.

805. Most of our manuscripts belong to the Byzantine period, and very few to any earlier time. Among the earliest are the *Persae* of Timotheus (*c.* 350 B.C.); the fragments of the *Antiope* of Euripides, and the *Phaedo* of Plato (250 B.C.) and of *Iliad* XI. 502—537 (240 B.C.) in the Petrie Papyri, 1891; the Louvre fragment of Euripides, *Medea* 5—12 (2nd cent. B.C.), the Harris *Iliad* 18 and the Bankes *Iliad* 24 (1st and 2nd cent. A.D.), the Herculanean papyri of Epicurus and Philodemus (*c.* 50 B.C.), the papyrus of Bacchylides (*c.* 50 B.C.), the Mariette

Eustathius.

Gregorius
Corinthius.

Planudes.

Moschopoulos.

Thomas
Magister.Theodorus
Metochites.

Triclinius.

Manuscripts.

papyrus of Alcman (1st or 2nd cent. A.D.), the papyri of Aristotle's 'Αθηναίων πολιτεία (c. A.D. 100), Hypereides (2nd cent. B.C.—2nd cent. A.D.), Isocrates' *de Pace*, and Herondas (1st—2nd cent. A.D.), the Berlin fragment of the *Melanippe* of Euripides (3rd—4th cent.), the Marseilles fragment of Isocrates' *ad Nicoclem* (3rd cent.), the Ambrosian ms. of the *Iliad*, the Vatican ms. of Dio Cassius, and the fragments of Menander, of the *Phaëthon* of Euripides, and of the *Birds* of Aristophanes (all of 5th—6th cent.). Most of the later MSS. owe their preservation to the fact that they were removed from Greek lands to Italy during the Revival of Learning. The best MSS. of Homer are now in Venice; of Hesiod and Herodotus, in Florence; of Pindar, in Rome, Florence, Milan and Paris; of Aeschylus, Sophocles and Apollonius Rhodius, in Florence; of Euripides, in Venice, Florence and Rome; of Aristophanes, in Venice and Ravenna; of Thucydides, in Florence, Rome, Munich and London; of Demosthenes and Plato, in Paris; and of Aristotle, in Venice, Rome and Paris.

Explanatory comments in the margins of manuscripts or between the lines of the text, are known as *Scholia*, and their authors as *Scholiasts*. Except in the case of later writers like Tzetzes, Moschopoulos and Triclinius, their names are seldom known. The *Scholia* have been the means of preserving fragmentary remains of ancient commentaries. Among the earliest are those on Alcman, in which Pamphilus (1st cent. A.D.) is named. The most important are those on the *Iliad*, which record for us the readings of Aristarchus and other Alexandrian critics, and even of pre-Alexandrian texts. Much in the earlier *Scholia* on Pindar, Aeschylus, Sophocles, Euripides and Aristophanes is ultimately due to Didymus. There are also important *Scholia* on Thucydides, Plato, Aeschines and Demosthenes, the last partly by Ulpian (early in 4th cent. A.D.), and by Didymus (published from a papyrus in 1904).

806. During the Byzantine period Greek was little studied in the West of Europe, except for ecclesiastical and diplomatic purposes, especially in connexion with negotiations between the Church and Empire in the West and the Church and Empire in the East. From the eighth and ninth centuries to the age of the Renaissance, it still survived as a living language in the extreme south of Italy. The knowledge of Greek, which possibly passed from Gaul to Ireland in the sixth century, was brought back to Frankland by the Irish monks, who founded the monastery of St Gallen in the early part of the seventh (614). Greek was studied at Canterbury under the Greek archbishop Theodore of Tarsus (d. 690), and the Irishman known as 'John the Scot' was capable of producing for Charles the Bald (845) a literal rendering of 'Dionysius the Areopagite.' Plato was hardly represented in the West except by Latin versions of the *Phaedo* and *Timaeus*. The knowledge of Aristotle, which was at first confined to translations of part of the *Organon* by Boëthius, was extended to the whole of the *Organon* after 1128. In and after 1150, Latin versions of Arabic renderings of Aristotle reached Europe from the

Western
Europe.

Arabs in Spain. The study of Aristotle's *Physics* and *Metaphysics*, proscribed at Paris in 1215, was permitted in 1255; and the renderings from the Arabic were in course of time superseded by renderings from the Greek, such as those of the *Politics* and other works of Aristotle, which were executed in 1272—81 by William of Moerbeke at the instance of Thomas Aquinas (d. 1274). The current translations of Aristotle were keenly criticised in 1272 by Roger Bacon, whose own knowledge of Greek is exemplified in his recently published *Greek Grammar* (1902). In and after the fourteenth century the mediaeval dependence on the authority of Aristotle was gradually weakened, and the transition from the Middle Ages to the Renaissance was attended by a general widening of the range of classical studies and, in particular, by a renewed interest in Plato.

807. The soil of Italy was prepared for the reception of Greek culture by the influence of Petrarch (1304—1374). He learnt a little of the language from a Greek monk named Barlaam (1342); and, in 1353, exactly a century before the fall of Constantinople, received from that city a ms. of Homer, which he set beside his ms. of Plato, sighing at the thought that, in both cases, the Greek text was to himself a sealed book. At his promptings Boccaccio (1313—1375) learnt Greek, and caused a pupil of Barlaam, Leontius Pilatus, to be appointed the first teacher of Greek in Florence (1360—63). For the use of Boccaccio and Petrarch, Pilatus prepared a Latin translation of Homer; while Boccaccio himself wrote a text-book of Greek mythology.

The Italian Renaissance.

Petrarch.

Boccaccio.

the first teacher

Even before the dispersion caused by the fall of Constantinople (1453), many teachers of Greek found their way into Italy. Manuel Chrysoloras (c. 1350—1415), who had visited the West as an imperial envoy, was invited to Florence in 1396 and taught Greek for three years, having among his pupils the eminent humanists Guarino, Filelfo, Poggio, Leonardo Bruni, Marsuppini and Traversari. He also taught Greek at Pavia (c. 1400), there producing a literal rendering of the *Republic*. He died at the Council of Constance in 1415. Georgius Gemistus Plethon (c. 1355—1450), born at Constantinople, lived for a long time on the site of Sparta. In his old age he lectured on Platonism in Florence (1439), and prompted Cosimo de' Medici to found the Platonic Academy which, through Ficino and Pico della Mirandola, influenced the thought of Italy, and, through Reuchlin and Melanchthon, even that of Germany.

Greek Immigrants.

Chrysoloras.

Plethon.

Bessarion (1403—1472), born at Trapezus, was a pupil of Plethon in the Peloponnesus, and took part in the Council of Florence (1439), joined the Church of Rome, became a Cardinal and Patriarch of Constantinople, was nearly elected Pope in 1471, and died at Ravenna in the following year. He translated the *Memorabilia* of Xenophon and *Metaphysics* of Aristotle, and bequeathed to Venice a vast number of Greek mss. which formed the foundation of the famous Library

Bessarion.

of St Mark's. Theodorus Gaza (c. 1400—75) left Thessalonica in 1430 and probably reached Italy in 1438. He taught Greek and learnt Latin at the celebrated school of Vittorino da Feltre at Mantua, became the first Professor of Greek at Ferrara in 1444, and went to Rome in 1451, to take part in the great scheme of Nicholas V for translating the principal Greek Classics into Latin. On the death of the Pope (1455), he went to Naples, withdrew in 1458 to an Abbey on the coast of Lucania, was recalled to Rome after 1464, and on the death of his patron Cardinal Bessarion (1472) finally retired to Lucania where he died in 1475. He translated parts of Aristotle and Theophrastus into Latin and Cicero *de Amicitia* and *de Senectute* into Greek. His Greek Grammar, the first modern manual to include Syntax, was used as a text-book by Budaeus in Paris and by Erasmus at Cambridge.

Theodorus
Gaza.

Georgius Trapezuntius (1395—1484), born in Crete, reached Venice c. 1430, taught Greek and learnt Latin under Vittorino, visited Padua and Vicenza, and went to Rome in 1440. He was compelled to leave Rome owing to faults of temper, and, after his return to Venice, was involved in further trouble by the publication of his comparison between Plato and Aristotle, to the advantage of the latter (1458). He wandered from place to place, and died at a great age in 1484. His numerous translations were only of moderate value, but his Latin handbooks to Greek earned him the reputation of being a sound grammarian.

Georgius
Trapezuntius.

Johannes Argyropoulos (1416—1486) of Constantinople was in Padua as early as 1441. In 1456 he was invited to Florence, where he lived under the patronage of the Medici for fifteen years, leaving in 1471 for Rome, where he died at the age of 70. He was the ablest of the Greek immigrants, and was highly esteemed as a translator of Aristotle; he also lectured on Thucydides. Among his pupils was Constantine Lascaris; his lectures were attended at Florence by Politian, and at Rome by Reuchlin.

Argyropoulos.

Demetrius Chalcondylas (1424—1511), who left Athens for Rome in 1447, taught Greek at Perugia in 1450, at Padua from 1463 to 1471, at Florence from 1471 to 1491, and at Milan from 1492 to his death. He showed much insight (not unmixed with caprice) in the emendation of Greek texts. He is best known as the editor of the *editio princeps* of Homer (Florence, 1488), followed by that of Isocrates (Milan, 1493), and Suïdas (*ib.* 1499).

Chalcondylas.

All the above teachers of Greek had reached Italy before the fall of Constantinople (1453). Among those who arrived after that event was Constantine Lascaris (1434—1501), who probably stayed in Corfu for two or three years after the fall of his native city. From 1460 to 1465 he taught Greek at Milan, being tutor to the princess Hippolyta Sforza; he afterwards went for about a year to the court of her father-in-law, Ferdinand I, at Naples; and finally settled at

Constantine
Lascaris.

Messina from 1466 to his death in 1501. One of his pupils at Messina became famous as Cardinal Bembo. His Greek Grammar was the first book printed in Greek (Milan, 1476).

His namesake Janus Lascaris (1445—1535) was born at Constantinople, and, after its fall, was taken to the Peloponnesus and to Crete. On reaching Venice he was sent to study Latin at Padua, at the charges of Cardinal Bessarion, who died in 1472. He taught Greek with great success at Florence, and visited the East twice in quest of mss. for Lorenzo de' Medici (*ob.* April, 1492). From Mount Athos he brought as many as 200 Greek mss. He was afterwards in high favour at the court of France, was its envoy at Venice (1503—8), and was placed by Leo X at the head of a school for Greek youths at Rome (1516). With Budaeus, he aided Francis I in forming the Library at Fontainebleau. He finally returned to Rome, where he died in 1535. His reputation mainly rests on his five *editiones principes*, all printed in Greek uncials with accents:—Greek Anthology, 1494; Callimachus, Euripides (four plays), *c.* 1494; Apollonius Rhodius, and Lucian, 1496. He also published the ancient Scholia on the *Iliad* (1517) and on Sophocles (1518).

Janus
Lascaris.

Marcus Musurus (*c.* 1470—1517) was a pupil of Janus Lascaris in Florence, *c.* 1486. After revisiting his home in Crete, he returned to Italy, and remained in or near Venice from 1494 to 1515, being Professor of Greek at Padua (1505—9) and in Venice (1513). In 1516 he was invited to Rome as Professor of Greek, and, in recognition of his Greek elegiac poem on Plato, was appointed Archbishop of Monembasia, but died of the plague before starting for his diocese. During his stay at Venice, he aided Aldus (1450—1515) in producing the *editiones principes* of Aristophanes (1498), Plato (1513), Athenaeus and Hesychius (1514), and Pausanias (1516). He also assisted in the *editio princeps* of the '*Etymologicum Magnum*' (1499). He is described by Erasmus, who met him in Rome, as *gente Graecus, eruditione Graecissimus*.

Musurus.

808. The interest taken in Greek by the earlier Italian humanists, Petrarch and Boccaccio, has already been noticed (§ 807). In the year of Boccaccio's death (1375) Coluccio Salutati was appointed Chancellor of Florence and promoted Greek learning by persuading Chrysoloras to accept the Chair of Greek (1396). The most enthusiastic pupil of Chrysoloras was Leonardo Bruni of Arezzo (1369—1444), who translated several of the speeches of Demosthenes and the Lives of Plutarch, part of Plato, and the Oeconomics, Ethics and Politics of Aristotle. Poggio (1380—1459) is best known as the discoverer of important Latin mss. at St Gallen and elsewhere, about 1415—7. His contemporary Cyriacus of Ancona (*c.* 1391—1450) was an unwearied traveller and an enthusiastic collector of ancient inscriptions in Greece and Italy.

Italian
humanists.

Leonardo
Bruni.

Cyriacus of
Ancona.

While Greek refugees, such as Theodorus Gaza and Georgius Trapezuntius, learnt their Latin under Vittorino, some of the foremost scholars of Italy visited Greek lands on purpose to learn the language. Thus Guarino

of Verona (1370—1460) lived for five years (1403—8) in the household of Chrysoloras at Constantinople, and afterwards taught in Florence, Venice, Verona and Ferrara, was interpreter at the Council of Ferrara (1438), and also translated parts of Strabo and Plutarch, besides commenting on Aristotle and editing, with a

Latin version, the *Accidence* of Chrysoloras. Similarly the Sicilian Aurispa (c. 1370—1459) visited Constantinople in 1422—3, learnt Greek and returned to Venice with 238 mss., mainly of Classical authors, having already sent to Niccolo de' Niccoli, the industrious collector of mss. at Florence, the important ms. of Aeschylus, Sophocles and Apollonius Rhodius, now known as the *Codex Laurentianus* (cent. x).

Lastly, Filelfo (1398—1481) spent seven years as a Secretary of Legation at Constantinople, returning with a large supply of Greek mss. (including at least 40 authors¹), and spending the rest of his long life as Lecturer in Greek and Latin at Venice, Florence, Siena, Milan and Rome.

809. Among eminent Italians who learnt their Greek in Italy may be named Traversari (1386—1439), one of the foremost in the literary circle of Florence, a writer of learned letters in excellent Latin, and the translator of Diogenes Laërtius; Laurentius Valla (1407—57), the elegant Latin scholar who translated Herodotus, Thucydides and two-thirds of the *Iliad*; Campanus (c. 1427—77), the translator of Plutarch's *Lives*; Perotti (1430—80), the translator of Polybius; Ficino (1433—99), the translator of Plato and Plotinus; and, lastly, one of Ficino's pupils, Politian (1454—94), who translated *Iliad* 2—5 into Latin hexameters at the age of 16, and afterwards counted among his pupils Reuchlin, Grocyn and Linacre.

The year of the death of Ficino was that of the birth of the greatest Greek scholar of Italy, Petrus Victorius of Florence (1499—1584), who edited Aeschylus (1557) and Sophocles (1547), and the *editio princeps* of the *Electra* of Euripides (1545), and who also produced elaborate commentaries on the *Ethics*, *Rhetoric*, *Poetics* and *Politics* of Aristotle, and displayed vast stores of critical learning in the 38 books of his *Variæ Lectiones* (1538, etc.). His younger con-

temporary, Robortello (1516—67), Professor at Padua and elsewhere, edited Aeschylus (1552) and Callimachus (1555), and, in his classical studies, paid special attention to metre and to chronology, besides laying the foundations of a theory of criticism in his work *de arte seu ratione corrigendi antiquos libros* (1557). Since his time most

¹ List in Symonds, *Revival of Learning*, p. 270^a.

of the best work of Italian scholars, except Corsini's *Fasti Attici* (1744—56), has been concerned with Latin rather than with Greek, and in both mainly with Archaeology.

810. Greek Scholarship was transmitted from Italy to France (1) through the Italian humanists Gregory Tifernas and Jerome Aleander, who were appointed to lecture in Paris in 1456 and 1508 respectively; and (2) through Janus Lascaris, who was in the French diplomatic service from 1495 to 1525. Among his pupils he counted Budaeus (1467—1540), who published his memorable *Commentarii linguae Graecae* in 1529. The learned printer Robert Estienne or Stephanus (1503—59) produced his Eusebius in 1544, his Greek Testament in 1546, and the works of Dionysius and of Dio Cassius on Roman History in 1546—8. His son Henri Estienne (1528—98), who is best known for his Greek *Thesaurus* (1572), and for his Plato (1578), was a pupil of Turnebus (1512—65), who as Greek Professor and as Director of the Royal Press in Paris produced editions of Aeschylus, Sophocles and the Ethics of Aristotle. Dorat (c. 1504—88) edited the *Prometheus* in 1549. The fame of Lambinus (1520—72), who spent nine years in Italy, and of Muretus (1526—85), who lived there from 1563 to his death, rests mainly on their Latin scholarship, though Lambinus translated the *De Corona* of Demosthenes, and the *Ethics* and *Politics* of Aristotle. The same is partly true of J. J. Scaliger (1540—1609), who passed the last 16 years of his life as Professor at Leyden. Before his call to that University in 1593, his most famous work (apart from editions of Latin authors) was his *De emendatione temporum* (1583); and, after that event, his *Thesaurus temporum*, including a masterly edition of the Eusebian and other chronicles (1606). His strength lay in a remarkable capacity for textual criticism, in a clear historic conception of antiquity as a whole, and in the concentration of vast and varied learning on important works.

Next to Scaliger, the most learned scholar of his time was Casaubon (1559—1614), who was Professor at Geneva, Montpellier and Paris, and spent the last four years of his life in England. His emendations are fewer than those of Scaliger, but they are more certain. He produced a masterly treatise on the Greek satyric drama and on Roman satire (1605); and his editions of Greek authors include Aristotle, the *Characters* of Theophrastus, Polybius, Strabo and Athenaeus. Salmasius (1588—1653), like Scaliger, left France for Leyden in 1631, a quarter of a century after his discovery of the Greek Anthology of Cephalas in the Palatine Library at Heidelberg (1606), but only two years after the publication of his greatest work, that on Solinus (1629). Guyet's criticisms on Hesiod and Hesychius, those of Petavius on Aratus and on chronological subjects, and Viger's work on Greek idioms (1627), can only be named in passing.

France.

Budaeus.

R. Stephanus.

H. Stephanus.

Turnebus.

Lambinus.

Scaliger.

Casaubon.

Salmasius.

Henri de Valois, *Valesius* (1603—76), did much for the elucidation of Harpocration (publ. 1682). Du Cange (1610—88), besides his great *Lexicon* of late Latin (1678), published a similar work on late Greek (1688) and an edition of the Byzantine historians (1680); while Montfaucon (1655—1741) laid the foundation of the study of Greek MSS. in his *Palaeographia Graeca* (1708), and also produced in 15 folio volumes a vast work on Greek and Roman Antiquities (1719, 1724). Strassburg was the home not only of Brunck (1729—1803), editor of Sophocles, but also of Schweighaeuser (1742—1830), editor of Herodotus, Polybius and Athenaeus. Herodotus was translated by Larcher (1726—1812); the Homeric Scholia were published by Villoison (1753—1805); Greek Palaeography minutely studied by Bast (1771—1811), and the *ed. princeps* of Babrius produced by Boissonade (1774—1857). Thurot (1823—82) and Barthélemy Saint-Hilaire (1805—1895) did good service for Aristotle; Graux (1852—82) showed the highest promise as a palaeographer; and Egger, in the course of his far longer life (1813—85), was the author of an *Essay on the History of Criticism in Greece* (1849), and of *Lectures on the History of Hellenism in France* (1869).

811. In the Netherlands the earliest name of note is that of Erasmus (1466—1536), who was born at Rotterdam, but who in his intellectual activity is more closely connected with France, England, Italy and Germany than with the land of his birth. He lectured in Paris in 1496 and visited England in 1497; on his return, spent ten years in France, Italy and the Netherlands, took his doctor's degree at Turin (1506), and lived with Aldus Manutius in Venice, during the reprinting of his *Adagia* (1508). He returned to England in 1510, was appointed Lady Margaret Professor of Divinity and Greek Lecturer at Cambridge, and went to Basel in 1514, where he published his Greek Testament in 1516, his treatise on Latin and Greek pronunciation in 1528, the first complete edition of Aristotle in 1531, and the *ed. princeps* of Ptolemy in 1531, and where he died in 1536.

Between 1530 and the foundation of the University of Leyden in 1575, the only important name connected with Greek scholarship is that of W. Canter (1542—75). His *Euripides* (1571) was the first in which the metrical responsions between *strophe* and *antistrophe* were clearly marked.

In the Second Period (1575—1650), Lipsius (1547—1606) was famous as a Latinist, and was succeeded by Scaliger, who was Professor at Leyden from 1593 to 1609. Gerhard John Voss (1577—1649) produced a work on the Greek historians (1623); and his contemporary Meursius (1579—1639) showed great learning in Greek antiquities. It was in his early years alone that

Scaliger's pupil, Daniel Heinsius (1581—1655), edited Greek authors. Salmاسius, professor at Leyden from 1631, only edited Greek writers of minor importance. Though he had discovered the *Anthologia Palatina* in 1606, it was the *Anthologia Planudea* alone that was known to Grotius (1583—1645) and was translated by him into Latin verse.

In the Third Period (1650—1750) Joh. Friedrich Gronovius (1611—71) was great as a Latin scholar; his son Jacob (1645—1716) published his Polybius in 1670, the *ed. princeps* of Manetho in 1689, and the *Thesaurus* of Greek Antiquities in 1697—1702. Nicolaus (son of Daniel) Heinsius (1620—81) was a Latinist. Graevius (1632—1703) edited Hesiod (1667), and also produced a posthumous edition of his son's Callimachus (1697). To the latter work an extensive collection of the Fragments and a new recension of the Epigrams was contributed by Bentley, with a prolix commentary by Bentley's friend, Spanheim (1629—1710), then Prussian minister in London, who is best known for his treatise on the importance of numismatics (1664). In this period, which was also that of Bos and Küster and of Bergler and Duker, by far the foremost Greek scholar in Holland was Hemsterhuis (1685—1766), the restorer of Greek learning in that country. He edited Pollux at an early age (1706) and was incited to remedy his defective knowledge of Greek metre by Bentley's criticism of his immature work. He also edited Lucian (completed by Reitz, 1743—1746), and the *Plutus* of Aristophanes (1744). His colleague Wesseling (1692—1764) edited Diodorus (1746) and Herodotus (1763).

The Fourth Period (from 1750 to the present day) opens with the name of Valckenaer (1715—85), who edited the *Iliad* (1747), the *Phoenissae* (1755) and the *Hippolytus* of Euripides with a Diatribe on the Fragments (1768), also the Bucolic Poets and the Fragments of Callimachus (1781); while, in another Diatribe (printed 1806), he exposed the forgeries of the Alexandrian Jew, Aristobulus. Ruhnken (1723—98), whose first *Epistola Critica* was on the Homeric Hymns and on Hesiod (1749), and his second on Callimachus and Apollonius Rhodius (1751), is celebrated as the editor of the Platonic lexicon of Timaeus (1754) and of the *ed. princeps* of the Homeric Hymn to Demeter (1780). He did much for the Greek grammarians and for Hesychius. He was also the author of a critical history of the Greek Orators (1768), and the discoverer of the lost *Rhetoric* of Longinus (1765). He is described by F. A. Wolf as *criticorum princeps*. His life was written by Wytttenbach (1746—1820), the unwearied editor of Plutarch's *Moralia* (1795—1821). The list closes with the great name of Cobet (1813—89), editor of Lysias (1863) and Diogenes Laertius (1850), and author of the *Variae Lectiones* (1854), the *Novae Lectiones* (1858), and the *Miscellanea Critica* (1876).

Third period.

J. Gronovius.

Hemsterhuis.

Fourth period.

Valckenaer.

Ruhnken.

Wytttenbach.

Cobet.

Colet's distinguished contemporary, Madvig (1804—86), belongs to Denmark, and is mainly famous in connexion with Livy and Cicero and Latin Grammar; his Greek scholarship is, however, well represented in his Greek Syntax (1847), and also in part of his *Adversaria Critica* (1871—84).

812. The revival of Greek learning in England was due to Selling, prior of Canterbury (d. 1494), who studied Greek under Politian in Florence, and to Linacre, who accompanied him on his next visit to Italy, attended the lectures of Politian and Demetrius Chalcondylas at Florence, and became acquainted with Hermolaus Barbarus in Rome (1485). Linacre produced a Latin rendering of the 'Sphere' of Proclus and of certain treatises of Galen; at his instance Grocyn, Lily and W. Latimer learnt Greek in Italy and inspired Oxford with an interest in Greek literature (1491). Grocyn, Linacre, Colet, and More are lauded by Erasmus in a letter written in London in Dec. 1499. Erasmus lectured on Greek in Cambridge (1510—3); and, after his departure, the interest in that language was sustained by Bullock and Croke of King's, by Thomas Smith of Queens', and by John Cheke and Roger Ascham of St John's.

In the First Period after the revival of Greek learning in England (1485—1570), Linacre and Ascham represent the imitative, elegant and tasteful type of scholarship characteristic of the Italian scholars of the Renaissance. The Second Period (1570—1700) is marked by industrious erudition rather than by special attention to the form of the classical languages. In this period was produced the remarkable series of Elizabethan translations, including North's *Lives* of Plutarch (1579), Chapman's *Homer*, and Plutarch's *Moralia* by Philemon Holland, the 'Translator-General' of his age. Sir Henry Savile edited Chrysostom (1613) with the aid of Downes, 40 years Professor of Greek at Cambridge; Selden published the *Marmor Parium* (1628); Thomas Gataker was the first Englishman who produced, in his *Marcus Aurelius*, an original commentary on any classical work (1652); while Milton not only studied Euripides, Pindar, Aratus, and Lycophron with the eye of a critic, but also sketched in his 'Tractate of Education' an encyclopaedic course of training in Greek literature (1644). During the Civil War Duport continued lecturing on Theophrastus at Cambridge, and translating the Book of Job into Homeric hexameters. In 1660 he was succeeded as Professor of Greek by Isaac Barrow; Thomas Stanley's *History of Philosophy* appeared in 1655—60, his *Aeschylus* in 1663; and Bishop Pearson's comments on *Diogenes Laërtius* in 1664. Thomas Gale published some of the Greek mythologists, and Iamblichus *de Mysteriis* (1678); John Hudson, *Thucydides* (1696) and *Josephus* (1720); and John Potter,

Lycophron (1697) and the 'Antiquities of Greece' (1699). About the close of the period Joshua Barnes edited Euripides (1694), Anacreon (1705) and Homer (1711); and H. Dodwell published his treatise *de Cyclis Veterum* (1701) and his *Annales Thucydidei et Xenophontei* (1702).

Barnes.
Dodwell.

The Third Period (1700—1782) begins with Bentley (1662—1742), the founder of classical criticism, and with the 42 years of his tenure of the Mastership of Trinity College, Cambridge. In his *Letter to Mill* (1691) he had published the first-fruits of his study of the Greek dramatists. In 1696 he collected the Fragments of Callimachus. In a masterly Dissertation published in 1697, and enlarged in 1699, he had proved the spuriousness of the '*Letters of Phalaris*.' In 1710 he emended Philemon and Menander; in 1722 he revised Nicander, and in 1732 and 1734 was busy with Homer, having discovered as early as 1713 that many of the metrical peculiarities of the Homeric poems were due to the lost *Digamma*. Among Bentley's friends were John Taylor, editor of Lysias, and Markland, editor of several plays of Euripides. Among those who came under his influence were Dawes, the student of Attic moods and tenses; Toup, the editor of 'Longinus'; Tyrwhitt, the commentator on the *Poetics*; Musgrave and Heath, the able critics of the Greek tragic poets; and (above all) Porson, who was first drawn towards critical research by Toup's *Longinus*, and who regarded Dawes and Bentley as his great masters in the art of criticism.

Third period.
Bentley.

The literary activity of Porson (1759—1808), who was Fellow of Trinity (1782—92) and Professor of Greek at Cambridge (1792—1808) was mainly limited to the 20 years between 1782 and 1803. His emendations of Aeschylus appeared in 1795; his first edition of the *Hecuba* of Euripides in 1797 (ed. 2, 1802), followed by the *Orestes*, *Phoenissae* and *Medea*. He advanced the study of Attic Greek by elucidating many points of idiom and usage, by establishing the laws of tragic metre, and by the emendation of texts.

Fourth period.
Porson.

Among Cambridge scholars, Twining (1734—1804) translated the *Poetics* of Aristotle; Dobree (1782—1825) did much for the criticism of the Attic orators; Monk (1784—1856) wrote the *Life of Bentley*, and edited several plays of Euripides. Five plays of Aeschylus were produced by C. J. Blomfield (1786—1857), and the whole by Samuel Butler (1774—1840). B. H. Kennedy (1804—89), his successor as Head Master of Shrewsbury, edited the *Agamemnon* and the *Oedipus Tyrannus*; and Shilleto (1809—76), Demosthenes, *De Falsa Legatione*, and Thucydides I, II. Blakesley (1808—85) edited Herodotus; W. H. Thompson (1810—86), the *Gorgias* and *Phaedrus* of Plato; E. M. Cope (1818—69), the *Rhetoric* of Aristotle, J. W. Donaldson (1811—61) completed K. O. Müller's *Greek Literature* and edited Pindar; and Charles Badham (1813—84), parts of Euripides and Plato. The best work of F. A. Paley (1816—88) was his Aeschylus; he also edited Euripides, Hesiod, Theocritus and the *Iliad*. T. S. Evans (1816—89) as well as

Greek scholars at Cambridge.

Kennedy and Shilleto, showed special ability in Verse Composition. W. G. Clark (1821—78) wrote on the Peloponnesus and edited Shakespeare. H. A. Holden (1822—96) edited Aristophanes and parts of Xenophon and Plutarch; and Churchill Babington (1821—89), the *ed. princeps* of four speeches of Hypereides. Sir Richard Jebb (1841—1905), the able author of the 'Attic Orators,' and of an Introduction to Homer, Lectures on Modern Greece, and on Greek Poetry, and monographs on Erasmus and Bentley, was distinguished as the editor of Sophocles and Bacchylides, and as the translator of Theophrastus. His genius in Classical Composition was exemplified in his 'Translations into Greek and Latin Verse.' He was Professor of Greek at Glasgow (1875—89) and Cambridge (1889—1905), M.P. for the latter University, and President of the Hellenic Society. A. W. Verrall (1851—1912), by his editions of the *Oresteia* and the *Medea*, and by his Essays, promoted an intelligent appreciation of the literary merits of Aeschylus and Euripides. S. H. Butcher (1850—1910) expounded Aristotle's *Poetics*.

At Oxford, Routh (1755—1854) edited the *Euthydemus* and *Gorgias* of Plato; Elmsley (1773—1825) the *Acharnians* of Aristophanes, and several plays of Sophocles and Euripides; Gaisford (1779—1855) the *Poëtae Graeci Minores*, Herodotus, Stobaeus, Suidas and the *Etymologicum Magnum*; Liddell (1811—98) and Scott (1811—87) produced a standard Greek Lexicon; Chandler (1828—89) a standard work on Greek Accents; George Rawlinson (1815—1903) translated Herodotus; Jowett (1817—94) translated Plato, Thucydides, and the *Politics* of Aristotle, and Pattison (1813—84) wrote the 'Life of Casaubon' and Essays on Scaliger. D. B. Monro (1836—1905) produced a 'Homeric Grammar' and an edition of *Odyssey* XIII—XXIV; I. Bywater (1840—1914), a commentary on Aristotle's *Poetics*.

The foremost of the English Historians of Greece have been Grote (1794—1871) and Thirlwall (1797—1875). Mure (1799—1860) wrote a work on Greek Literature, and Fynes-Clinton (1781—1852) the *Fasti Hellenici*.

In Classical Topography and Archaeology we must only mention Stuart and Revett's *Antiquities of Athens* (1762—1816); E. Dodwell's *Tour in Greece* (1819); Leake's *Topography of Athens* (1821), *Travels in the Morca* (1830) and *Northern Greece* (1835); the works of Fellows on Lycia, of Pashley and Spratt on Crete, and of Bunbury on Ancient Geography. Sir Charles Newton (1816—94), the discoverer of the Mausoleum of Halicarnassus, was one of the principal founders of the Hellenic Society (1879) and the British School of Archaeology at Athens (1886).

813. An interest in Greek scholarship was transmitted from Italy to Germany by Rudolf Agricola 1443—85, who spent seven years in Italy and specially studied the philosophy of Aristotle, and by Reuchlin (1455—1522), who visited that country in 1482, 1490, 1498, and published his Greek Grammar in 1506. The Grammar of Melanchthon, the *praeceptor Germaniae*

Greek
scholars at
Oxford.

Historians of
Greece.

Greek ar-
chaeologists.

Germany.

Reuchlin.

Melanchthon.

(1497—1560), was first printed in 1518. Melanchthon and his biographer Camerarius (1500—74) translated some of the speeches of Demosthenes. In the next generation, Sylburg (1536—96) edited Aristotle, Pausanias and Clement of Alexandria, as well as the *Etymologicum Magnum*. Sylburg.

In the eighteenth century, J. A. Fabricius of Hamburg (1668—1736) supplied in his *Bibliotheca Graeca* (14 vols. 1705—28) important materials for the history of Greek Literature; Fabricius; Damm of Berlin (1699—1778) produced lexicons to Homer and Pindar; and Reiske of Leipzig (1716—74) edited the Greek Orators, Dionysius of Halicarnassus, and other important works. Reiske. The science of Classical Archaeology was founded by his contemporary Winckelmann (1717—68), who lived at Rome 1755—68 and published his *History of Ancient Art* in 1764. The founder of scientific Numismatics was Eckhel of Vienna (1737—98), whose *Historia Numorum* was published in 1792—8. Winckelmann. Eckhel. Winckelmann's friend Heyne (1729—1812), for thirty years prominent as a professor at Göttingen, edited Virgil, Pindar and the *Iliad*, and wrote much on ancient Art. Among Heyne's pupils were Jacobs (1764—1847), translator of Demosthenes and editor of the Greek Anthology; Schneider, the Greek lexicographer (1750—1822); Matthiae, the Greek grammarian (1769—1835), and Dissen (1784—1837), editor of Pindar and the *De Corona*. Heyne.

A new era was begun by F. A. Wolf (1759—1824), who was Professor at Halle (from 1783) and at Berlin (from 1807). In 1782—92 he edited Plato's *Symposium*, Hesiod's *Theogony* and the *Leptines* of Demosthenes, and in 1795 produced his famous *Prolegomena* to Homer. Among his pupils were not only August Boeckh and Immanuel Bekker, but also Heindorf (1774—1816), editor of part of Plato; Schleiermacher (1768—1832), translator of the whole; Passow (1786—1833), the Greek lexicographer; and Bernhardt (1800—75), the editor of Suidas and author of important *Histories of Greek and Roman Literature*. F. A. Wolf.

Classical Philology, as understood by Wolf, was soon divided into two great fields of research, cultivated by separate groups of scholars:—(1) the *grammatical and critical* school, concerned mainly with the grammar, the textual criticism and the interpretation of the Classics; and (2) the *historical and antiquarian* school, dealing mainly with the mythology and archaeology, the political and legal institutions and the comparative philology of the ancient world.

The head of (1) was Gottfried Hermann (1772—1848), 50 years Professor at Leipzig, who did much for the text of the Greek Tragic poets. His pupil Lobeck of Königsberg (1781—1860) commented on the *Ajax* of Sophocles, edited Phrynichus, and dealt with the Greek Mysteries in his *Aglaophamus*. G. Hermann. Lobeck. Lobeck's successor Lehrs (1802—78) made his mark by his Lehrs.

works on Aristarchus and Herodian, and on the Scholia to Pindar.

Meineke. Meineke (1790—1870) distinguished himself as a critic of the Greek Comic poets and of Alexandrian literature, besides editing Strabo and Athenaeus. His son-in-law Bergk (1812—81) is best known as editor of the *Poëtae Lyrici Graeci*.

Bergk.

Bergk's contemporary Ahrens (1809—81) devoted himself to the Greek dialects; Schneidewin (1810—56), with Leutsch, to the *Paroemiographi*, also to the Lyric Poets and Sophocles. The *Poëtae Scenici Graeci* were first

W. Dindorf.

produced in a single volume in 1830 by W. Dindorf (1802—83), who also edited the Homeric Scholia and Demosthenes, and joined in revising the Paris edition of the Greek *Thesaurus*.

Nauck.

Nauck (1822—92) published texts of Homer, Sophocles, Euripides and (above all) a collection of the *Tragicorum Graecorum Fragmenta*.

Bekker (1785—1871) collated more than 400 manuscripts, and produced a vast series of carefully edited texts, including Plato, the

Bekker.

Attic Orators, Aristotle (with the Index by Bonitz), Thucydides, Homer (with the *Scholia* to the *Iliad*), several Greek lexicographers, besides Dio Cassius and many of the Byzantine historians. Lachmann (1793—1851) is famous as an editor

Lachmann.

not only of Lucretius, but also of the Greek Testament, and as author of a critical treatise on the *Iliad* (1837). Ritschl (1806—76), of

Ritschl.

Bonn and Leipzig, besides his distinction as editor of Plautus, was the author of a masterly monograph on the Alexandrian libraries. Among Greek Grammarians may be mentioned Buttman (1764—1829), Thiersch (1784—1860), Krüger (1796—1874), and

Grammarians; Demosthenic and Aristotelian scholars.

Kühner (1802—78); among Demosthenic scholars, G. H. Schaefer (1764—1840), Voemel (1791—1868), Rehdantz (1818—79), Sauppe (1809—93), and the historian, Arnold

Schaefer (1819—83); and among Aristotelian scholars, Brandis (1790—1867), Spengel (1803—80), Bonitz (1814—88), Bernays (1824—81), Sussemihl (1826—1901), Vahlen (1830—1912). Usener (1834—1905) is best known for his *Epicurea*.

The historical and antiquarian School begins with Niebuhr, the historian of Rome (1776—1831). Boeckh (1785—1867),

Boeckh.

whose main achievement in pure scholarship was his edition of Pindar (1811—22), produced a monumental work on the Public Economy of Athens (1817), followed by his *Corpus Inscriptionum Graecarum* (1825—40) and by important metrological and chronological works, closing with a general survey of the whole field of classical philology.

Welcker.

Welcker (1784—1868) wrote on the Epic Cycle and on Greek Tragedy, as well as on Greek Archaeology and Mythology;

K. O. Müller.

K. O. Müller (1797—1840) on Aegina and Orchomenus, on the Dorians and Etruscans, on the Archaeology of Art

Schömann.

and on the Literature of Greece. Schömann (1793—1879) edited Isaeus and wrote on Greek Law and Constitutional

Antiquities; K. F. Hermann (1804—55) on Greek Antiquities; and Preller (1809—61) on Mythology. Jahn (1813—69) did much towards making classical archaeology an exact science. Side by side with Mommsen (1817—1903), the historian of Rome, we must name Ernst Curtius (1814—96), the historian of Greece, the writer on the topography of Attica and the Peloponnesus, and the inspirer of the exploration of Olympia. His brother, Georg Curtius (1820—85), produced important works on the Greek Verb and on Greek Etymology and was a leading representative of the School of Comparative Philology founded by Bopp (1791—1867). The History of Sicily and of Greece was the life-long theme of Adolf Holm (1830—90). The History of Classical Philology in Germany has been written by the author of the 'Geography of Greece,' Conrad Bursian (1830—83).

K. F. Hermann.

Jahn.

E. Curtius.

G. Curtius.

Holm.

Bursian.

In this brief outline of the History of Greek Scholarship in Greek lands, as well as in Italy, France, the Netherlands, England and Germany, many notable names have unavoidably been omitted: further information may, however, be found in the authorities quoted below.

General bibliography in Hübner's *Bibliographie der klassischen Alterthumswissenschaft*, ed. 2, pp. 1—139, 1889. Bibliographies of the special literature of the several parts of the subject in J. E. Sandys, *History of Classical Scholarship* (with chronological tables, and with 86 illustrations) in three volumes, (i) from the Sixth Century B.C. to the end of the Middle Ages, 2nd ed., 702 pp., 1906; (ii and iii), from the Revival of Learning to the end of the Nineteenth Century, 1021 pp., 1908. Outlines (with bibliographies and 'loci classici') in A. Gudeman, *Grundriss zur Geschichte der klassischen Philologie*, 2nd ed., 260 pp., 1909; see also W. Kroll, *Geschichte der klassischen Philologie*, 152 pp., 16mo., 1908, Otto Immisch, *Wie studiert man klassische Philologie?* 1909, and J. E. Sandys, *Short History of Classical Scholarship*, pp. 455, 1915.

Bibliography.

Among books dealing with definite portions of the subject, or with individual scholars, may be mentioned:—On the history of the science of language, H. Steinthal, *Geschichte der Sprachwissenschaft bei den Griechen und Römern*, 2 vols. (2nd ed., 1891). For the Alexandrian period, Susemihl's *Geschichte der griechischen Litteratur in der Alexandrinerzeit*, 2 vols. (1891—2). For the period ending A.D. 400, Gräfenhan, *Geschichte der klassischen Philologie* (1843—50). For the Byzantine period, Krumbacher in Iwan von Müller, IX. (1), ed. 2, 1897. For the Revival of Learning, G. Voigt, *Die Wiederbelebung des classischen Alterthums* (ed. 3, 1894); J. A. Symonds, *Revival of Learning* (ed. 3, 1897); and R. C. Jebb, in *Cambridge Modern History*, I. (1902), 532—84; also J. E. Sandys, *Harvard Lectures on the Revival of Learning* (1905). For the History of Greek Scholarship in France, Egger, *l'Histoire d'Hellénisme en France* (1869), Mark Pattison's *Essays* I. (1889), and *Life of Casaubon* (ed. 2, 1892); in Holland, L. Müller, *Gesch. der class. Philologie in den Niederlanden* (1869); in England, Jebb's *Erasmus* (1890), *Bentley* (1882), and *Porson* (in *Dict. Nat. Biogr.*); on Sir Richard Jebb, as Scholar and Critic, A. W. Verrall, on pp. 427—87 of *Life and Letters* (1907). For its History in Germany, Bursian's *Gesch. der class. Philologie in Deutschland* (1883), and also, for the earlier period, the second half of Geiger's *Renaissance und Humanismus in Italien und Deutschland* (1882).

I. INDEX OF PERSONS, DEITIES AND RACES.¹

The numbers refer to the sections.

- Abantes 39
 Achaeans 34 ff., 38 ff., 112 f.,
 634; of the Peloponnese
 30
 Achilles 38; Tatius 235
 Acragas 379
 Acusilaus 134, 165
 Adonis 99, 409
 Aeacus 38 f.
 Aelian 54, 68, 73, 228, 282
 Aelius Dionysius 803; Hero-
 dianus 204, 802; Theon
 221
 Aenesidemus 276
 Aeolians 27, 37, 110, 117,
 150
 Aeschines 32, 178, 494
 Aeschylus 50, 155 ff., 159,
 635
 Aesop 47
 Aethiopians 34
 Aetolians 430
 Africanus, Sextus Iulius 106
 Agatharchus 712
 Agathias 196 ff.
 Ageladas 320
 Agesander 341
 Agesilaus 406
 Agias of Troezen 144
 Agis III 472
 Aglaophon 348
 Agoracritus 326
 Akaiwasha 38
 Alcaeus 150, 729
 Alcamenes 321, 326, 406
 Alcibiades 456, 710
 Alciphron 226
 Alcmaeon of Crotona 714
 Alcmaeonidae 109, 445
 Alcman 151, 733
 Alexander I 39; the Great
 125, 282, 310, 332 f.,
 587, 601, 718; of Aphro-
 disias 266
 Alexinus 243
 Alexis 164
 Alyattes 315, 580
 Alypius 389
 Ameinocles 617
 Ammon 546
 Ammonius 801
 Amocbaeus, actor 567
 Amphiarus 395, 414
 Amphilocheus the Athenian
 93
 Amyclas of Heraclea 280
 Anacreon 136, 146, 150
 Anaxagoras 135, 239, 280
 Anaximander 165, 237
 Anaximandridas 660
 Anaximenes 165, 237, 281,
 626
 Andocides 173; vase painter
 361 f.
 Androdamas of Rhegium 474
 Andronicus of Rhodes 266
 Anniceris the younger 243
 Antenor 316
 Antidotus 350
 Antigonus 125; Dason, Go-
 natas 126; Monophthal-
 mus 520; sculptor 337
 Antimachus of Colophon 147
 Antinous, marble relief of
 344
 Antiochus Epiphanes 311;
 of Ascalon 277
 Antipater of Sidon 196
 Antiphanes 164
 Antiphilus 352
 Antiphon 172, 280
 Antisthenes 238, 243
 Antonius Diogenes 234
 Apelles 331, 346, 351
 Apellicon 770
 Aphaea 320
 Aphrodite 57, 82, 89, 323,
 327 ff., 395, 409
 Apthionius 221
 Apollo 44, 52, 89, 128,
 314 f., 319 f., 323, 327 ff.,
 330, 389, 396, 403, 420 f.,
 435, 546
 Apollodorus 164; of Athens
 106, 203, 349, 801
 Apollonius 341; Dyscolus
 204, 802; Rhodius 189,
 731; of Perga 282
 Appianus of Alexandria 39,
 213
 Aratus 126; poet 193, 282
 Arcadians 37
 Arcadius 204
 Arcesilas 276
 Arcesilaus 343, 735
 Archelaus of Priene 341
 Archermus of Chios 315 f.
 Archilochus 42, 46, 90, 94,
 149, 155
 Archimedes 282, 622, 733
 Archytas of Tarentum 280 f.
 Arctinus of Miletus 144
 Ares 411
 Arete 663
 Arethusa 71
 Argives 37 f., 113
 Arion 36, 155
 Aristander 328
 Aristarchus 136, 201 ff., 282,
 801

¹ The indexes contain no references to the Chronological Tables.

- Aristeides, Publius Aelius 223; artist 350; of Ceos 474
 Aristippus 243, 271
 Aristobulus 100
 Aristonophus 615
 Aristophanes 47 f., 64, 98, 159, 162 f., 368; of Byzantium 136, 201 f., 770
 Aristotle 42, 44 f., 46 ff., 52 ff., 64 ff., 71 ff., 81 ff., 97, 129, 185, 239, 247, 255 ff., 279 ff., 281, 335, 383, 716
 Aristoxenus 392
 Arrian 86, 217, 730
 Artemis 304, 310, 315, 325, 327, 395, 404
 Artemon 604
 Asclepiades, of Samos 196; physician 723
 Asclepius 24, 107, 328, 395, 414, 714 ff., 719
 Asius of Samos 147
 Aspasia 663, 666
 Athanodoros 341
 Athena 51 f., 59, 94, 315, 320 ff., 323, 327, 377 ff., 402, 420, 669; Ergane and Itonia 402; Polias 521
 Athenaeus 52, 81 ff., 227, 803
 Athenians 37, 122
 Athenis of Chios 315
 Attalus I 337

 Babrius 195
 Bacchus 89, 406
 Bacchylides 153, 735, 781
 Balbilla 736
 Barbarians 113
 Bathycles of Magnesia 315
 Bion of Smyrna 191
 Biton 314
 Boeotians 6, 10, 38, 116
 Boethus 339, 341, 379
 Bottiaean 39
 Bryaxis 328, 333
 Bryges 39
 Bupalus of Chios 315
 Butades of Corinth 315

 Cabeiri 26
 Cadmus 38; of Miletus 165
 Caecilius of Calacte 802
 Calamis of Athens 320 f.
 Callimachus 188, 198, 201, 282, 649, 655, 801; architect 305, 311
 Callinus 133 f., 148
 Callippus of Cyzicus 281
 Callisto 404
 Callixenus of Rhodes 622
 Canachus 320
 Candaules 580
 Carcinus of Naupactus 147
 Carians 37
 Carneades 276 f
 Cassander 125
 Cecrops 38, 109, 441
 Cephisodotus 326
 Ceres 90, 101; temple of 309
 Chachryllion 362
 Chaldaean 281
 Chares of Lindos 333
 Chariton of Aphrodisias 235
 Charon 63, 165, 634
 Charondas of Catana 474, 546
 Choerilus of Athens 155; of Samos 147
 Chrysipus 271, 801
 Chrystosom, Dion 223
 Chrysothemis of Crete 128
 Cinesias 164
 Cinyras 610
 Cleantes 271 ff.
 Cleisthenes 446, 462, 474, 684
 Cleitodemus 170
 Cleobis 314
 Cleomenes III 126, 472, 533
 Cleon 487
 Cleophon 512
 Clytiadae 416
 Colotes 326
 Conon of Samos 282
 Constantinus Cephalas 197, 804; Porphyrogenitus 804
 Corax of Syracuse 171
 Corinna 659
 Corinthians 39
 Counades, Andreas 47
 Crates 162; philosopher 254, 271; of Mallus 137, 801
 Cratinus 155, 162
 Cresilas 325, 335
 Cretans 39
 Crinagoras of Mytilene 196
 Critius 320 f.
 Croesus 119, 310, 315, 581 ff.
 Cronius 382
 Ctesias 45, 47, 53, 217
 Cynaethus of Rhodes 143, 146
 Cypselus of Corinth 437, 544
 Cyzicenus of Athens 280

 Daedalus 314
 Damasia 445
 Damophila 663
 Damophon of Messene 334
 Danaans 38, 113
 Danaus 38
 Darius 120, 580
 Deinarchus 181, 202
 Deinostratus 280
 Demaratus 377
 Demeter and Persephone 369 f., 407
 Demetrius Phalereus 282, 336, 523 f., 526; Poliorcetes 351, 609, 622; Triclinius 770
 Democedes 720 f.; of Croton 567
 Democritus 239, 270
 Demosthenes 39, 177, 335, 494, 637
 Deucalion 398
 Dexamenus of Chios 382
 Diacrii 14
 Didymus 136, 146, 201, 801
 Diocles of Carystus 716, 720
 Diodorus Siculus 107, 211; Cronus 243
 Diogenes Laertius 219, 269; of Babylon 277; of Sinope 243
 Diogenianus 205
 Dion Cassius 214; Chrysostom 223
 Dione 400
 Dionysius I 123, 604, 607, 621; of Halicarnassus 107, 182, 212, 222, 780; Thrax 204, 282, 801
 Dionysodorus 240
 Dionysus 330, 382, 394 ff., 406, 424 f.
 Diophantus of Alexandria 282
 Dioscorides 86, 90, 94, 100; engraver 382
 Dioscuri, the 414
 Diphilus 164
 Dipoenus of Crete 314
 Dodonaean 37
 Doedalsas 339
 Dolopes 6
 Dorians 6, 14, 27, 35 ff., 39 f., 112, 116, 161 f., 431, 463, 545, 665, 733
 Draco 437, 444, 491
 Dryopes 6
 Ducetius 121

 Empedocles 94, 147, 239; temple of 310

- Epameinondas 124, 599, 719
 Ephorus 37, 170
 Epicharmus 61, 733
 Epictetus 217, 232, 277;
 vase painter 363
 Epicurus 268 ff.
 Epimenides 90
 Epitadeus 472
 Erasistratus 716, 723
 Eratosthenes 106, 200, 206,
 217, 282, 801
 Erechtheus 417
 Erichthonius 395, 402
 Erinyes 398, 413
 Eros 409
 Eteobutadae 416
 Eteocretans 36
 Eubulides 243, 342
 Eubulus 517
 Eucleides, archon 447, 740;
 of Megara 243
 Euclid 279 ff., 281 f.
 Eudemus 266, 280 f.
 Eudoxus 193, 271, 280 f.,
 653
 Eugammon of Cyrene 144
 Eugeon of Samos 165
 Euhemerus 243, 396, 400
 Eumelus of Corinth 147
 Eumenes II 137, 282, 338,
 637, 650
 Eumolpus 34, 128
 Eupatridae 109, 441 ff.
 Euphorion of Chalcis 193,
 196
 Euphranor 350
 Euphronius 362 f., 368
 Eupolis 162
 Eupompus 350
 Eur-Africans 34
 Euripides 159 ff., 164, 335,
 651
 Europa 89
 Eusebius 106
 Eustathius 103, 138, 804
 Euthydemus 240
 Eutychides 333
 Evenus of Paros 240, 567

 Galen 87, 93 ff., 230, 715 f.,
 723
 Ganis, invasion of the 126
 Gellius, Anlus 202
 Gelon 120, 591
 Glaucus of Chios 315, 556
 Glycon of Athens 342
 Gorgias 171, 240, 567, 647
 Greeks 31, 39; names for
 113
 Gregorius Corinthius 804

 Gyges 118
 Gylippus 532, 606

 Harpocraton, Valerius 205,
 803
 Hecataeus of Miletus 107,
 165, 730
 Hecate 328
 Hegesias 243
 Hegias 320
 Heliodorus 235
 Hellenicus 37, 107, 111, 134,
 165
 Hellenes 33, 36 ff., 113
 Hephaestion 205, 803
 Hephaestus 410
 Hera 58, 107, 304, 310,
 325, 327, 400 f., 403
 Heraclidae, genealogy of
 108
 Heracleitus 165, 237, 271
 Heracles 87, 315, 320, 331,
 414, 570
 Herennius Philon 803
 Hermagoras of Temnos 221
 Hermes 20, 59, 320, 323,
 330, 405 f.
 Hermesianax of Colophon
 196
 Hermippus 103
 Hermogenes of Tarsus 221,
 803
 Hermotimus of Colophon
 280
 Herodas 195, 198, 730
 Herodian 204, 215
 Herodotus 37 f., 45 ff., 59,
 64, 73, 107, 166, 422,
 717, 730
 Heron of Alexandria 282
 Herophilus 723
 Hesiod 90, 112, 145, 644,
 658
 Hestia 412
 Hesychius of Alexandria 803;
 of Miletus 106, 803
 Hieron 121; the second 126;
 vase painter 362
 Himerius 224
 Hipparchus 206, 282, 720
 Hippias of Elis 111, 240,
 278, 280, 647; tyrant 437,
 445
 Hippocrates of Chios, 280;
 physician 105, 107, 714,
 719, 730
 Hipponax of Ephesus, 149,
 316
 Hischylus, 362
 Homer 36 ff., 42, 47 f., 87,
 90, 130 ff., 133, 335,
 656 ff.; the *Epigrams* and
 Margites ascribed to 133
 Homeridae 134, 146
 Hyacinthus 90, 403
 Hygieia 328
 Hypatia 282
 Hyperacrii 14
 Hyperbolus 460
 Hypereides 180, 539, 736
 Hypsicles 282

 Iamblichus 234
 Iapetus 398
 Ibycus 51, 735
 Indo-Europeans 34 f., 39
 Ion 725
 Ionians 14, 27, 38, 40, 112,
 117, 148, 545, 659; philo-
 sophers 237 f.
 Iphicrates 599
 Isaens 134, 176
 Isocrates 175, 329, 422, 567
 Isyllus 733

 Josephus 216
 Jove 87
 Juba II 803
 Julian, emperor 224
 Julius Pollux 205

 Kydones 36

 Laocoon, statue of 341
 Lasus 390
 Leleges 37
 Leochares 328 f., 332
 Leodamas of Thasos, 280
 Leon the Platonist 280
 Lesches of Mytilene 144
 Leto 328, 400, 403
 Leucippus 239, 281
 Libanius of Antioch 224,
 804
 Locri Ozolae 10
 Locrians 10, 30, 38
 Longinus, Cassius 221
 Longus 235
 Lucian 192, 225, 348 f., 730,
 736
 Ludius 352
 Lycophron 192
 Lycurgus, orator 179, 517,
 720; king 406, 463, 472,
 719
 Lydians 580 f.
 Lysander 440, 532
 Lysias 174, 422
 Lysicrates, choragic monu-
 ment of 311

- Lysippus 327, 331 f., 343,
 375 f.
 Lysistratus 332
 Macedonians 39
 Magnes 162
 Magnetes 6, 39
 MamerCUS 280
 Marcus Aurelius 222, 232,
 277
 Medontids 443
 Megarians 29, 161
 Megasthenes 217
 Megisto 404
 Meidias 363, 490
 Meleager of Gadara 196 f.
 Melissa 238
 Memnon 622
 Menaechmus 280
 Menander 164, 335, 425
 Menecrates 341
 Menedemus 243
 Menelaus, geometer 282
 Mentor 379
 Metochites, Theodorus 804
 Meton 280 f.
 Metrodorus of Lampsacus
 268
 Micciades of Chios 315 f.
 Micon 158, 348
 Mimmermus 148
 Minoans 34 f., 38
 Minyae 38, 40
 Mnason, slave-owner 565
 Mnesarchus 382, 644
 Moeris 205, 804
 Moschopoulos, Manuel 804
 Moschus 191
 Musaeus 128
 Muses, the 128
 Myrmidons 38, 593
 Myron of Eleutheræ 318 f.,
 320 f., 422
 Mys 379
 Mysians 46
 Nabis 472, 533
 Nemesis 404
 Neocleides 280
 Nesiotas 320 f.
 Nicander of Claros 193
 Nichomachus of Gerasa 282;
 painter 350
 Nicias 606; artist 330,
 350
 Nicomedes 282
 Nicosthenes 362
 Nike Apteros 306 f., 310,
 315
 Nonnus 194
 Oenopides of Chios 280
 Olen 128
 Olympos of Phrygia 150
 Onatas 320
 Oppian 44, 47, 74, 193
 Orestae 39
 Orpheus 128
 Orthagoras of Sicyon 437
 Ortygia 328
 Paeonius of Mende 321
 Palladas of Alexandria 196
 Pamphaeus 362
 Pamphilus, painter 350, 643;
 lexicographer 205, 803
 Pamphos 128
 Pan 100, 413, 417
 Panaenus 348
 Panaetius 277
 Panyasis 147
 Pappus of Alexandria 282
 Parali 14
 Parmenides 147, 238
 Parrhasius of Ephesus 349,
 352
 Parthenii 545
 Parthenius of Nicaea 233
 Pasion 540, 565
 Pasiteles 343; engraver 382
 Paulus 'Silentiarius' 196
 Pausanias 37 f., 46 f., 87,
 103, 134, 208, 302, 305,
 315, 317; Atticist 803
 Pausias 350, 352
 Pedieis 14
 Peiraeicus 352
 Peisander of Rhodes 147
 Peisistratus 317, 437, 445,
 511, 513
 Pelasgians 35 ff., 725
 Pelasgo-Tyrsenians 39
 Pelopids 38
 Pentheus 406
 Periander 534
 Pericles 100, 456, 459, 481,
 487, 512, 548, 684
 Perioeci 22
 Perrhaebi 6, 39
 Persephone 369 f., 407
 Perseus, mathematician 282
 Phaedo 243
 Phalaris, Epistles of 226
 Phayllus 422
 Pheidias 317, 320, 322 ff.,
 325, 343, 400
 Pheidon of Argos 569, 584 f.;
 of Corinth 474
 Pherecrates 92, 162, 799
 Pherecydes of Leros 59, 165
 Philaidæ 109
 Philammon 128
 Philemon 164, 425
 Philetærus 570
 Philetas of Cos 196, 198,
 329
 Philip of Macedon 39, 124,
 580, 600 f.; of Thessalo-
 nica 197
 Philippus of Mende 280
 Philiscus 341
 Philo of Larissa 277; engi-
 neer 609
 Philochorus 107, 109, 170,
 524
 Philolaus of Corinth 474
 Philostratus 220
 Phocæans 30, 119
 Phocylides 148, 644
 Phoenicians 29, 38, 40, 35+,
 579
 Photius 87, 234, 804
 Phradmon 325
 Phrygians 39
 Phrynichus 155, 157, 162,
 803
 Pindar 58, 85, 152, 735
 Pittacus 437
 Planudes, Maximus 197, 804
 Plato 42, 57 f., 89, 91 f.,
 134, 184, 239 f., 243 f.,
 255 ff., 279 f., 335, 383,
 491, 716; comicus 162
 Plotinus 277
 Plutarch 54, 57, 100, 103,
 166, 218
 Pluto 407
 Polemon of Athens 254,
 271; of Ilium 197, 208
 Pollux, Julius 205, 803
 Polyænus 228, 268
 Polybius 107, 209, 736
 Polycleitos of Argos 320, 325 f.
 Polycles 342
 Polycrates of Samos 317,
 598, 614
 Polydorus 341
 Polyuctus 335
 Polygnotus 348, 352
 Polymedes of Argos 314
 Porphyrius 138
 Poseidippus 164
 Poseidon 309, 323, 328, 408,
 417
 Poseidonius 277, 282
 Pratinas 155
 Praxagoras of Cos 723
 Praxidamas 317
 Praxiteles 326 ff., 329, 343,
 370, 409
 Priapus 413

- Proclus 144, 280
 Prodicus 240, 647
 Prometheus 104
 Proserpine 90
 Protagoras 204, 242, 567, 647
 Protogenes 351
 Psellus 804
 Ptolemaeus, Claudius 206, 282
 Ptolemy Lagi 282; Philadelphus 125, 520, 622; Philopator 622
 Pyrgoteles 382
 Pyrrho 192, 276
 Pyrrhus of Epeirus 126
 Pythagoras 238, 279 f., 280, 384, 714; of Rhegium 320 f.
 Pytheas 379; of Massilia 281

 Quintus of Smyrna 194

 Rameses III 38
 Rhexibius 317
 Rhianus 193
 Rhoecus 315, 375, 556

 Sappho 148, 150, 659, 729
 Satyreus 382
 Scopas 326 ff., 330 f., 343, 376, 406, 408
 Scylax 206
 Scyllis of Crete 314
 Scymnus 206
 Seleucus 47, 125
 Selli 426
 Semonides of Amorgos 149
 Serenus of Antissa 282
 Sextus Empiricus 231, 276
 Sicanians 29
 Sicels 29, 121
 Silanion 335
 Simonides of Ceos 134, 148, 150, 659, 735
 Socrates 241 ff.
 Solon 148 f., 437, 444 ff., 480 f., 535, 577, 637, 644, 731
 Solygeius 39

 Sophocles 91, 158 ff., 335
 Sophron of Syracuse 161, 733
 Sosibius 342
 Spartans 119, 123
 Speusippus 254
 Stasinus of Cyprus 144
 Stephanus, sculptor 343; of Byzantium 804
 Stesichorus 151 f., 233, 659, 735
 Stilpo 243, 271
 Stobaeus 229, 804
 Strato 266
 Strabo 37 ff., 68, 207, 282
 Strattis 164
 Suidas 106, 205, 804
 Susarion 161

 Tauriscus 341
 Temenos 39
 Terpander 150, 154, 390, 733
 Thales 219, 237, 280, 721
 Thaletas 151, 733
 Thamyris 128
 Theaetetus of Athens 280
 Theagenes of Rhegium 135
 Themis 400, 413
 Themistius 224
 Themistocles 58, 617
 Theocosmus 326
 Theocritus 94, 190, 198, 733
 Theodorus, mathematician 243, 280; Metochites 804; of Samos 315, 375, 382, 556; *tabula Iliaca* of 644
 Theognis 58, 148, 644
 Theon, mathematician 282; painter 352
 Theophrastus 86 f., 90 ff., 94, 99, 105, 266, 281
 Theopompus, historian 109, 170; king 463; of Miletus 625
 Theraeans 28
 Theseus 324, 441
 Thespis 155
 Thessalians 6, 10, 39, 116

 Thetis 328
 Theudius of Magnesia 280
 Thomas Magister 804
 Thoucritus 731
 Thracians 39
 Thraco-Phrygians 39
 Thucydides 37, 107, 111 ff., 167, 731
 Timaeus of Tauromenium 107, 170
 Timanthes 349
 Timoleon 124
 Timonachus of Byzantium 352
 Timon of Phlius 192, 276
 Timotheus of Miletus 153; sculptor 328 f.
 Tisias 171, 240
 Titans, the 398
 Triclinius, Demetrius 804
 Trophonius 395
 Tryphon 382
 Tyrseni 37
 Tyrtaeus 39, 148, 733
 Tzetzes 804

 Vitruvius 298, 301, 305

 Xanthus 165
 Xenocrates 254, 271, 342
 Xenophanes 147, 238, 579
 Xenophon 44, 58, 64, 96, 168 f., 217, 736; *'Αθηναίων Πολιτεία* wrongly ascribed to 169; of Ephesus 235
 Xerxes 103, 120
 Xiphilinus, John 214

 Yavana 33

 Zaleucus 437, 474 f., 546
 Zeno 238, 271 ff.
 Zenodorus 282
 Zenodotus 136, 201, 282, 801
 Zeus 15, 319 f., 321 ff., 327, 331, 394 f., 396, 398, 400, 417 f., 422, 435
 Zeuxis of Heraclea 349, 352
 Zopyrus 379

II. INDEX OF PLACES.

- Abae 403
 Abdera 547, 625
 Academy, the 14
 Acanthus 5
 Acarnania 3, 9, 25, 116, 296
 Acbaia 19, 629
 Achelous 3, 9
 Acheron 7
 Achradina 29, 605
 Acrae 29
 Acragas (or Agrigentum) 29, 309
 Acritas 17, 21
 Acro-cornith 18
 Acropolis 15, 58, 603, 680
 Acte 5, 37
 Actium 7
 Aegae 39
 Aegaleos 14
 Aegean, islands of 31, 37, 62, 73, 81, 115
 Aegialea 117
 Aegina 24, 39, 308 f., 320, 526, 551, 576, 733, 739
 Aeginium 6
 Aeginum 19
 Aetna 29
 Aetolia 9, 32, 116, 296, 629
 Aganippe, fountain of 12
 Agora of Athens 15
 Agrae 428
 Agrigentum 29, 309, 733
 Alexandria 28, 136, 158, 186
 Alpheus 2, 20, 23, 422
 Altis, the, at Olympia 20
 Ambracia 7, 59; Ambracian gulf 2, 3, 7
 Amorgos 675
 Amphipolis 5, 548
 Amphissa 10
 Amyclae 328, 403
 Anapus 29
 Anatolia 87
 Andania 733
 Andros 3, 26
 Antandros 37
 Anthela 421
 Aous 3, 7
 Apidanus 6
 Apollonia 7
 Apulia 591
 Arachthus 3, 7
 Araxes 48
 Araxus 19
 Arbela 45, 601
 Arcadia 2, 22 f., 35, 87, 100, 124, 405, 408, 435, 728
 Areopagus 15, 491
 Arginusae 539
 Argive plain 24
 Argolis 17, 23, 32, 37, 39, 116, 292, 295, 707; Argolic gulf 2
 Argos 2, 22 ff., 37 ff., 46, 107, 118, 409, 421, 528, 551, 553, 739; Amphilo-chian 7
 Aroanius 17
 Artemisium 17, 23, 624; straits of 3
 Asia Minor 27, 306, 310, 341, 370, 555, 739
 Asopus 10, 12
 Aspendus 117
 Astypalaea 637
 Athens 2, 13 ff., 47, 51, 107 f., 119, 161, 307 ff., 310, 314, 320, 326, 339, 343, 348, 353, 367 ff., 373 f., 389, 400 ff., 417, 420 f., 422, 425, 432, 438 ff., 440 ff., 463 ff., 476 ff., 512 ff., 521 ff., 537, 550 ff., 554, 559 ff., 573, 577, 660 ff.
 Athos 5, 57
 Attica 8, 14, 26, 32, 37, 292, 295, 314, 345, 400, 441 ff., 492, 522, 526, 539 f., 739
 Aulis 13
 Axios 4
 Balkans, the 39
 Barca 28
 Bassae 305, 308, 310 f.
 Boeotia 8, 12, 32 f., 37 f., 43, 116, 128, 292, 295, 314, 369 f., 376, 402, 432, 534, 594, 645
 Borysthenes 28
 Bosphorus 28, 513
 Branchidae 307
 Brauron 159
 Brea 548
 Byzantium 28, 281, 536, 547, 551
 Caicus 27, 328
 Calauria 408, 421
 Callirhoë 15
 Calymna 27
 Camarina 29
 Cambunian mountains 3, 6
 Cameirus 27, 377
 Cantharus 16
 Caphareus 13
 Cappadocia 103
 Caria 26
 Carpathos 26
 Casmenae 29
 Casas 26
 Castalia 11
 Catana 29
 Cayster 27
 Cenchreae 18
 Ceos 8, 26, 739
 Cephallenia 25, 296
 Cephissus 10 ff., 14
 Cerameicus 15
 Cerycion, mt. 405
 Chaeronea 12, 124, 400
 Chalcedon 28, 583, 587
 Chalcidice 5, 555
 Chalcis 5, 13, 375, 436, 543, 548, 551
 Chaonia 7
 Chelonatas 20, 25
 Chios 117, 134, 143, 314, 316, 534, 551, 637, 691
 Cirphis 11
 Cirrha 11
 Cithaeron 8, 12, 14
 Cladius 20
 Clazomenae 373, 555
 Cleonae 24
 Climax 23
 Cnemis 10
 Cnidus 27, 116 f., 123, 315, 370, 716
 Cnossus 40, 284, 286 ff., 293, 298 ff., 347, 555, 668, 702 ff.
 Coela 6, 13
 Colonus 14, 408
 Colophon 134, 436
 Copias 2, 12, 60, 89, 690
 Corcyra 25, 440, 546

- Corinth 6, 18, 59, 89, 127,
 295, 303, 343, 354, 356,
 376, 409, 421, 432, 436,
 526, 528, 543, 546, 551,
 556, 568, 739; isthmus
 of 2, 408; gulf of 2, 10 ff.,
 14, 18
 Coronea 12
 Corycian cave 11
 Coryphasium 21
 Cos 27, 76, 116, 408, 416,
 675, 691, 715, 733
 Crannon 6
 Creston 37
 Crete 26, 32 ff., 35 ff., 39 f.,
 46, 88, 115 f., 283 ff.,
 289 f., 295, 298, 314, 380,
 396, 429 f., 438, 474 ff.,
 533, 543, 592, 636, 668,
 703 ff., 738 f.
 Crisa 11; Crisaean gulf 10,
 11
 Croton 68, 349, 547
 Cumae 30
 Cyclades 3, 8, 26, 31 ff., 44,
 117, 283, 289, 291, 295, 730
 Cydonia 91
 Cyllene, mt. 2, 17, 52, 405;
 port of 20
 Cyme 27, 477
 Cynoscephalae 127
 Cyprus 28, 40, 117, 294,
 301, 315, 369 f., 372,
 551, 555, 579, 728
 Cyrene 46, 100, 549, 556,
 573, 716, 733
 Cythera 26, 409, 551
 Cythnos 8, 26
 Cyzicus 28, 339, 549, 582,
 587

 Daphnus 10
 Dardanus 58
 Daulis 11
 Decelea 14
 Delium 12
 Delos 26, 303, 309, 314 f.,
 337, 403, 421, 521, 536,
 578, 733, 739
 Delphi 11, 126, 309, 314 ff.,
 323, 346, 380, 389, 403,
 417, 421 f., 521, 537, 562,
 710
 Delphinion, the 491
 Demetrias 6
 Didyma 303, 310, 730
 Dimeni 295, 708
 Diolcos 18
 Dionysiac theatre 15
 Dirce 12

 Dirphys 13
 Dodona 7, 37, 113, 395,
 400, 729
 Doris 10
 Dryoscephalae 14
 Dyme 19
 Dyrhachium 4
 Dystos, lake 60

 Echinades 9
 Ecnomus 621
 Edessa 4
 Eetioneia 16
 Egnatian Way 4
 Eion 5
 Eira 21
 Elatea 11
 Eleusis 14, 297, 396, 521,
 731
 Elimiotis 39
 Elis 20, 38 f., 116, 322, 409,
 422, 434
 Enipeus 6
 Epeirus 3, 7, 25, 32, 39, 47,
 116, 440
 Ephesus 34, 304, 310, 315,
 325, 375, 417, 562
 Epidamnus 7
 Epidaurus 24, 305, 310 f.,
 715, 717, 733
 Epipolae 604 f.
 Erechtheum 15, 402
 Eretria 13, 120, 343
 Erymanthus 2, 17, 20
 Eryx 29, 409
 Euboea 13, 26, 39, 551, 730;
 Euboic sea 12, 14
 Euripus 12 f.
 Eurotas 20, 22, 465
 Eva 17
 Evenus 9

 Fretum Siculum 30

 Gades 587
 Gela 29
 Gerace 310
 Geraestus 13
 Geranea 8, 14
 Gortyn 475 ff., 733, 752
 Gournia 286
 Granicus, the 332, 601
 Gytheum 22

 Hagia Triada 287 f., 668, 705
 Haliacmon 3, 4, 39
 Haliartus 12
 Halicarnassus 27, 117, 370;
 Mausoleum at 310
 Hamaxitos 44

 Helice 19
 Helicon 4, 8, 12
 Hellespont 37, 690
 Heraclea 732
 Heraeum at Argos 401; at
 Olympia 20, 401
 Hermione 24
 Hermus 27
 Hestiaea 548
 Hestiaotis 6
 Himera 29, 58
 Hippocrene 12
 Hybla 691
 Hymettus 14, 313, 691
 Hypanis 28

 Ialysus 27
 Iapygia 116
 Icaria 155
 Ichthys 20
 Ida 27, 87, 90, 400
 Idalion 728
 Ilissus 14
 Illyricum 3, 7
 Imbros 26, 37
 Iolcos 6, 295
 Ionia 32, 40, 148, 315, 739
 Ischia 42
 Ismenus 12
 Isopata 300
 Issus 602
 Ithaca 25
 Ithome 17, 21

 Kamares 286
 Kapakli 295
 Kerata 14

 Labdalum 606
 Lacedaemon 22, 432, 464, 527
 Lacmon 3, 6, 7
 Laconia 22, 32, 116, 292,
 532 f., 551, 660; Laconian
 gulf 2, 22
 Lade 624
 Ladon 20
 Lampsacus 165
 Larissa 6, 24
 Larnaka 369
 Laureium 513, 539, 551
 Lebadea 12, 395
 Lechaem 18
 Lectum 27
 Lemnos 26, 37, 410, 417
 Leontini 29
 Lerna 68
 Lesbos 27, 117, 150, 551,
 691, 727
 Leucas 25, 296, 376, 708
 Leucate 25

- Leuctra 12, 106, 123, 435, 527, 599
 Libya 46
 Lindus 27, 341
 Locri Epizephyrii 30, 374
 Locris 116
 Long Walls 16
 Lycabettus 15
 Lycacum 17, 21, 400
 Lycia 315
 Lycosura 334
 Lydia 37
 Lydias 4
 Lyncestis 4, 39

 Macedonia 4, 39, 47, 59, 73, 87, 91, 125 f., 440, 520, 528
 Maeander 27
 Maenalus 17, 23, 47
 Magna Graecia 30, 310, 529, 551, 716
 Magnesia 3, 310
 Malca 29
 Maliac gulf 2 f., 6, 8, 10
 Malis 10
 Mallus 117
 Mantinea 2, 23, 330, 435, 597, 599, 604
 Marathon 14, 362, 422, 433
 Massilia 30, 281, 543, 555, 617
 Megalopolis 23, 308, 681
 Megara 14, 91, 98, 543, 554, 739; Hyblaea 29
 Megaris 14
 Melos 26, 37, 116 f., 289 ff., 295, 297, 378, 380, 706, 727, 739
 Menidi 294
 Mesogaea 14
 Messana 30, 126
 Messene 21
 Messenia 21, 32, 116, 128, 472, 532; Messenian gulf 2
 Messina, straits of 18
 Methana 2, 24
 Methymna 27, 380
 Miletus 315 f., 403, 543 f., 552, 554, 730
 Mimas 27
 Minoa 38
 Mochlos 285, 668
 Molottis 7
 Munychia 16, 620
 Mycale 27
 Mycenae 24, 40, 47, 114, 283, 292 ff., 299, 302, 347, 380, 429 f., 543, 556, 578, 584, 668, 707, 710
 Myconos 26, 65
 Mysia 91
 Mytilene 27, 380, 582

 Naqada 285
 Naucratis 28, 315, 370, 546, 746
 Naupactus 39
 Nauplia 24, 401
 Naxos 26, 29, 289, 314 f., 406, 551, 739
 Neapolis 30
 Neda 20
 Nemea 24, 422
 Neritos 25
 Nestus 4
 Nicopolis 378
 Nisaea 14
 Nysa, mt. 406

 Oeniadae 9
 Oenophyta 12
 Oëroë 12
 Oeta 8, 10
 Olbia 28, 549, 553, 587
 Olympia 20, 307 ff., 321 f., 400 f., 417, 422 f., 434, 553, 641, 708
 Olympieum 400
 Olympus 2, 4, 6, 143, 400
 Olynthus 5, 124, 547
 Onchestus 435
 Oneian mountains 18
 Onochonus 6
 Ophis 604
 Orbelus 4
 Orchomenus 12, 37, 292 f., 295, 297, 300, 435, 708, 728
 Oropus 14, 729
 Ortygia 29, 404, 604
 Ossa 3, 6
 Othrys 3, 6, 8, 33, 38, 40, 295

 Pachynus 29
 Pactolus 579
 Paestum 308 f.
 Pagae 14
 Pagasae 6, 295, 345; Pagasae gulf 2, 3, 6
 Palaikastro 286 f., 610
 Palladium, the 491
 Pallene 5, 398
 Palus Maeotis 28
 Pambotis 7
 Pamisus 6
 Panormus 29

 Panticapaeum 28, 378
 Paphos 28, 409, 728
 Paralia 14
 Paramythia 376
 Parnassus 2, 8, 11
 Parnes 8, 14
 Parnon 22
 Paros 26, 289, 314 f., 328, 330, 727, 739
 Parthenium 17, 23
 Parthenon 15, 402
 Patrae 19
 Peiraeus 16, 513, 561, 604, 751
 Pelasgicum 15
 Pelasgiotis 6
 Pelion 3, 6
 Pella 4
 Pellene 19, 323
 Peloponnese 17, 32, 38 ff., 292, 302, 375, 400, 728
 Peneus 2, 3, 6, 20
 Pentelicus 8, 14
 Pergamum 334, 337 ff., 520, 715, 736
 Perge 117
 Perrhaebia 295
 Petra 6
 Petsofa 286, 668
 Phacacia 25
 Phaestus 284, 286 ff., 705, 738
 Phalerum 16, 604
 Pharsalia 6
 Phaselis 620
 Phasis 553
 Pheneus 2, 23
 Pherae 6, 701
 Phigaleia 395
 Phlegra 320
 Phlius 24, 739
 Phocaea 48, 315, 543, 552, 582
 Phocis 11, 32, 39, 116, 124, 177, 295
 Pholoë 20
 Phreatto 491
 Phrygia 148, 297
 Phthiotis 6, 143
 Phylakopi 291, 706 f.
 Phyle 14
 Pieria 4, 6, 128
 Pindus 3, 6, 8
 Pisatis 20
 Placis 37
 Plataea 12, 323, 417, 605 f.
 Pleistus 11
 Plemmyrium 29
 Pontus 101
 Potidaea 5, 512, 546

- Praesos 34, 36
 Priene 308, 310, 710
 Prinos 23
 Propontis 28
 Propylaea 15, 306
 Prytaneum, the 417, 491
 Ptous 403
 Pydna 4, 127
 Pylos 21, 293, 296, 701

 Rhamnus 409
 Rhegium 30, 33, 320
 Rheneia 26
 Rhinm 19
 Rhodes 26 f., 116 f., 294,
 314, 334, 341, 369, 568,
 609, 637, 691

 Sacred Plain, the 11; Sacred
 Way, the 14
 Salamis 14, 28, 154, 294,
 353, 417, 548
 Samos 27, 58, 117, 304, 310,
 314 f., 512, 548
 Samothrace 26, 37
 Sardis 310
 Saronic gulf 14, 24
 Scardus 3, 4
 Sciritis 22
 Scylace 37
 Scyros 26, 548
 Scythia 28
 Segesta 306
 Seige 117
 Selinus 29, 309 f., 370, 739
 Sellasia 22, 126, 472
 Seriphos 8, 26
 Sesklo 708
 Sicily 18, 29, 32, 43, 120 f.,
 126, 301, 303, 370, 432,
 546
 Sicyon 19, 39, 320, 330,
 424, 437, 555, 573, 635,
 716, 739
 Sidon 83

 Sigeum 27
 Sinope 28, 547, 553, 555
 Siphnos 8, 26, 315, 739
 Sithonia 5
 Soli 73
 Sparta 22, 30, 107 f., 114,
 118 f., 151, 395 a, 409,
 422, 435, 438 ff., 463 ff.,
 527, 534, 553, 565, 594,
 632, 635, 660, 672
 Spata 294
 Spercheus 2, 8, 10, 38 f.,
 292
 Sphacteria 21
 Stageira 547
 Stenyclerus 21
 Stratus 9
 Strymon 4
 Stymphalus 2, 23, 401
 Sunium 8, 14, 308, 433
 Sybaris 30, 544, 552
 Sybota 624
 Syracuse 29, 78, 124 ff., 161,
 309, 343, 436, 528, 543,
 547, 604 ff., 676

 Tanagra 12, 369, 405, 435,
 557, 677
 Tarentum 30, 83 f., 127, 331,
 343, 554, 604
 Tarsus 117
 Taygetus 2, 17, 47
 Tegea 22, 23, 305, 314, 328,
 417, 435, 728
 Temnos 395
 Tempe 6
 Tenea 317
 Tenedos 117
 Tenos 3, 26
 Teos 310, 637
 Testaceo, Monte 83
 Thasos 26, 67, 551, 691,
 739
 Thebes 11 f., 123 f., 395 a,
 406, 409, 435, 440

 Thera 2, 26, 116 f., 289, 727,
 733, 739
 Thermaic gulf 3
 Thermon 708
 Thermopylae 6, 10, 11, 151,
 595
 Thesum, the 246 f.
 Thesmophorus 407
 Thespieae 12, 343, 435, 729
 Thesprotia 7
 Thessalotis 6
 Thessalonica 4, 32
 Thessaly 6, 32, 37 ff., 46,
 87, 91, 292, 295, 400,
 402, 429, 434 f., 438, 440,
 594
 Thrace 37, 46, 73, 91, 424
 Thyamis 7
 Thyrea 22
 Tiiryns 24, 292 f., 229, 347,
 353, 380, 429, 668, 707,
 710
 Tmolus, mt. 495
 Toronaic gulf 5
 Torone 5
 Trapezus 28
 Tricca 6, 715
 Triodos 11
 Triphylia 20, 292
 Troad 27, 310
 Troezen 24, 733
 Troy 37 f., 91 f., 283, 297 ff.
 Tsangli 706
 Tymphrestus 3, 8, 39
 Tyre 83
 Tyrrhenian sea 30

 Vaphio 293, 668

 Zacynthus 25
 Zakro 287, 668
 Zana 127
 Zea 16, 620
 Zoster 14

III. INDEX OF SCHOLARS AND MODERN WRITERS.

- Agricola, Rudolf 813
 Ahrens, H. L. 813
 Aleander, Jerome 810
 Aquinas, Thomas 806
 Archer-Hind, R. D. 251
 Argyropoulos, Johannes 807
 Ascham, Roger 812
 Aurispa, Giovanni 808

 Babington, Churchhill 812
 Bacon, Roger 806
 Badham, C. 812
 Barnes, J. 812
 Barrow, I. 812
 Bast, F. J. 810
 Bekker, I. 813
 Bentley, R. 812
 Bergk, Th. 813
 Bernays, J. 813
 Bernhardt, G. 813
 Bessarion 807
 Blakesley, J. W. 812
 Blomfield, C. J. 812
 Boccaccio 807
 Boeckh, A. 813
 Boissonade, J. F. 810
 Bonitz, H. 813
 Bopp, F. 813
 Brandis, C. A. 813
 Brunck, R. F. P. 810
 Bruni, Leonardo 808
 Budaeus, G. 810
 Bunbury, E. H. 812
 Bursian, C. 813
 Butcher, S. H. 812
 Buttman, P. 813
 Bywater, I. 812

 Camerarius, J. 813
 Campanus, G. A. 809
 Canter, W. 811
 Casaubon, I. 810
 Chalcondylas, Demetrius 807
 Chandler, H. W. 812
 Chrysoloras, Manuel 807
 Clark, W. G. 812
 Cobet, C. G. 811
 Cope, E. M. 812
 Curtius, E. and G. 813
 Cyriacus of Ancona 808

 Damm, C. T. 813
 Dawes, R. 812
 Dindorf, W. 813
 Dissen, L. G. 813
 Dobree, P. P. 812
 Dodwell, E. and H. 812
 Donaldson, J. W. 812
 Dorat, J. 809
 Du Cange, C. du F. 810
 Dupont, J. 812

 Eckhel, J. H. 813
 Egger, E. 810
 Elmsley, P. 812
 Erasmus, Desiderius 811 f.
 Evans, Arthur 31, 283, 285,
 668
 Evans, T. S. 812

 Fabricius, J. A. 813
 Fellows, Sir C. 812
 Ficino, Marsilio 809
 Filelfo, Francesco 808
 Fynes-Clinton, H. 812

 Gaisford, T. 812
 Gale, T. 812
 Gataker, T. 812
 Gaza, Theodorus 807 f.
 Graevius, J. G. 811
 Graux, C. 810
 Gronovius, J. and J. F. 811
 Grote, G. 142, 812
 Grotius, H. 811
 Guarino of Verona 808
 Guyet, F. 810

 Heath, B. 812
 Heindorf, L. F. 813
 Heinsius, D. and N. 811
 Hemsterhuis, T. 811
 Hermann, G. and K. F. 813
 Heyne, G. G. 813
 Holden, H. A. 812
 Holm, A. 813
 Hudson, J. 812

 Jacobs, F. C. W. 813
 Jahn, O. 813
 Jebb, R. C. 812

 John the Scot 806
 Jowett, B. 812

 Kennedy, B. H. 812
 Krüger, K. W. 813
 Kühner, R. 813

 Lachmann, C. 813
 Lambinus, D. 810
 Larcher, P. H. 810
 Lascaris, 'Constantine 807;
 Janus 807, 810
 Leake, W. M. 812
 Lehrs, K. 813
 Leutsch, E. L. von 813
 Liddell, H. G. 812
 Linacre, Thomas 812
 Lipsius, J. H. 811
 Lobeck, C. A. 813

 Madvig, J. N. 811
 Markland, J. 812
 Marsuppini, Carlo 807
 Matthiae, A. H. 813
 Meineke, A. 813
 Melanchthon, P. 813
 Meursius, J. 811
 Milton 812
 Mommsen, T. 813
 Monk, J. H. 812
 Monro, D. B. 812
 Montfaucon, B. de 810
 Müller, K. O. 813
 Mure, W. 812
 Muretus, M. A. 810
 Musgrave, S. 812
 Musurus, Marcus 807

 Nauck, A. 813
 Newton, Sir C. 812
 Niebuhr, B. G. 813

 Paley, F. A. 812
 Pashley, R. 812
 Passow, F. L. C. F. 813
 Pattison, M. 812
 Pearson, Bp. 812
 Perotti, N. 809
 Petavius, D. 810
 Petrarch 807

- Pilatus, Leontius 807
 Plethon, G. G. 807
 Politian 809
 Porson, R. 812
 Potter, J. 812
 Preller, L. 813

 Rawlinson, G. 812
 Rehdantz, K. 813
 Reiske, J. J. 813
 Reuchlin, J. 813
 Revett, N. 812
 Ridgeway, W. 34 f., 279
 Ritschl, F. W. 813
 Robortello, F. 809
 Routh, M. J. 812
 Ruhnken, D. 811

 Saint-Hilaire, B. 810
 Salmasius, Cl. 197, 810
 Sauppe, H. 813
 Savile, Sir H. 812
 Scaliger, J. J. 810 f.
 Schaefer, A. and G. H. 813
 Schleiermacher, F. 813
 Schliemann, H. 24, 31, 283,
 668

 Schneider, J. G. 813
 Schneidewin, F. W. 813
 Schömann, G. F. 813
 Schweighaeuser, J. 810
 Scott, R. 812
 Selden, J. 812
 Selling, W. 812
 Sergi, Giuseppe 34
 Shilleto, R. 812
 Spanheim, E. 811
 Spengel, L. 813
 Spratt, T. A. B. 812
 Stanley, T. 812
 Stephanus, H. and R. 810
 Stuart, J. 812
 Susemihl, F. 813
 Sylburg, F. 813

 Taylor, J. 812
 Theodore of Tarsus 806
 Thiersch, F. W. von 813
 Thirlwall, C. 812
 Thompson, W. H. 812
 Thurot, C. 810
 Tifernas, Gregory 810
 Toup, J. 812

 Trapezuntius, Georgius 807 f.
 Traversari, Ambrogio 809
 Turnebus, A. 810
 Twining, T. 812
 Tyrwhitt, T. 812

 Usener, H. 813

 Vahlen, J. 813
 Valckenaer, L. K. 811
 Valla, Laurentius 809
 Valois, Henri de 810
 Verrall, A. W. 812
 Victorius, Petrus 809
 Viger, F. 810
 Villoison, J. B. 810
 Voemel, J. T. 813
 Voss, G. J. 811

 Welcker, F. G. 813
 Wesseling, P. 811
 William of Moerbeke 806
 Winckelmann, J. J. 322,
 813
 Wolf, F. A. 141, 813
 Wytttenbach, D. 811

IV. INDEX OF GREEK WORDS AND PHRASES.

- ἄβαξ, ἀβάκιον** 278, 562,
 643
ἄβατον 427
ἄβρῶτονον 90
ἄγαλμα 395 *a*
ἀγαρμόν 97
ἀγγούριον 96
ἀγέλαι, ἀγελάται 636
ἄγλημα 601
ἄγκιστρον 74
ἄγκουα 620
ἄγκυραι 620
ἄγλις 98
ἄγνος 89
ἀγνῦθες 554
ἀγορά, assembly 431, 452,
 460, 468, 473; market
 (ἀγορᾶς πληθούσης) 560,
 683; ἀγορᾶς διάλυσίς 683
ἀγορανόμοι 455, 561, 577
ἀγοραστής 560
ἀγριόχοιρος 46
ἀγροίκος (ἀστεῖος) 568
ἄγρωσις 93
ἀγυρμός 428
ἄγχειν 641
ἄγχουσα 102
ἀγωγή 438, 471
ἀγών (comic) 161
ἀγῶνες (arguments) 171
ἀγῶνες ἀτίμητοι 495; δη-
 μῆσιοι, ἴδιοι 493; τιμητοὶ
 495, 507
ἀδάμας 556
ἄδεια 521
ἀδιαντον 90
ἀδιαφορία 276
Ἄδωνιδος κήποι 99
ἀετός (ornith.) 50; (archit.)
 306
ἀηδῶν 52
ἀθάρη 91
ἀθήρ 91
ἀθλοθέται 455
αἰγίερος 87
αἰγίβαλος 52
αἰγίθος 52
Αἰγικορέϊς 442
αἰγίλωψ 87
αἰγίπυρος 89
αἰγοθήλας 56
- αἰγοκέφαλος** 51
αἰγυπιός 50
αἰδέσις 491
Αἰθιοπίς 144
αἶθουσα 709 *f.*
αἶθυια 62
αἴλουρος 47
αἰμορροίς (αἰμορρᾶς) 83
αἶνος 195
αἶξ 46
αἶρα 91
αἰρετοί 453
αἰσυνῆται 119, 437
αἰσχρολογία 164
αἴτια 256
αἰώρα 638, 665
ἀκαλανθίς 52
ἀκαλήφη 85, 96
ἀκανθίας 72
ἀκάνθιον 103
ἀκανθίς 52
ἄκανθος 90
ἀκανθυλλίς 52
ἄκατοι 616
ἀκοήν μαρτυρεῖν 502
ἀκόντιον 101
ἀκόντιον 591 *f.*
ἀκοντισμός 641
ἀκοντιστής 592
ἀκοστή 91
ἀκράτισμα 683, 692
ἀκρίς 79
ἀκροστόλια 620
ἀκρωτήρια 306, 620
ἀκτάζειν 695
ἄκυλος 87
ἄλαδε μύσται 428
ἀλειατα 91
ἄλεκτορίς 58
ἄλεκτρῶν 58
ἄλέκτωρ 58
ἄλευρον 91
ἀλίνδησις 641
ἀλιποφυρίς 54
ἀλίφλαος 87
ἄλκη 46
ἄλκων 54
ἄλογον 46
ἄλσεια Περσεφονείης 87
ἄλτηρες 422, 641
ἄλυπον 100
- ἄλφια** 91
ἄλώπηξ 42, 47, 72
ἀμανταί 97
ἄμαξα 685
ἀμάρακος 98
ἀμβίκα 282
ἀμέθυσον 381
ἄμι 98
ἀμία 71
ἀμμωνιακόν 100
ἀμύργη 103
ἀμπελόπρασον 98
ἄμπελος 94
ἀμπεχόνη 673
ἄμπυξ 676
ἀμυγδαλή 95
ἀμφίβληστρα 74
ἀμφιδρόμα 632
ἀμφιθάλαμος 711
ἀμφίπολι 656
ἀμφισβητεῖν 662
ἀμφιφορεύς 573
ἀμφορεύς, ὁ ἄκυρος, ὁ κύριος
 507, 573, 691
ἀμφοτερόπλους 564
ἄν, κεν 727
ἀναγραφεῖς 447
ἀναδενδράς 94
ἀναθήματα 197; (δαιτός) 95
ἀναθυμίασις 274
ἀνάκρισις 499 *ff.*, 505
ἀνάκρουσις 789
ἀναλογία 279
ἀνάμνησις 248
ἀναξυρίδες 674
ἀνάπαιστος 790
ἀνδραποδισταί 496
ἀνδράφαξ (ἀδράφαξ) 96
ἀνδράχνη 96
ἀνδρέα 471
ἀνδρῶν 693, 710; ἀνδρωντίς
 710 *f.*
ἀνεμώνη 90
ἀνηθον 98
ἄνῆρ, εὐζωνος 571
ἀνηsson 98
ἀνθέμιον 306
ἀνθέρικος 90
ἀνηθῶν 94
ἀνθίας 71
ἀνθολογία 197

ἄνθος 52
 ἄνθραξ 381
 ἀνθρώπη 75
 ἀνθρώπων ἀγαθόν 262
 ἀνθυπωμοσία 505
 ἀνοπαία 59
 ἄνπανσις 480
 ἀντηρίδες 620
 ἀντίδοσις 514 ff.
 ἀντίλαβή 158
 ἀντιλαγάνευον (τὴν ἔρημον, τὴν μὴ οὖσαν) 510
 ἀντιτιμᾶσθαι 507
 ἄντλος 611
 ἀντωμοσῖαι 500
 ἀξία, ἀπαξία 275
 ἀξιώματα 271
 ἀπαγωγή 496
 ἀπάθεια 276
 ἀπαλλαγὴ 500
 ἄπειρον 237
 ἀπελεύθεροι 537
 ἀπελλά 463, 468
 ἀπέταιρος 477
 ἀπήνη 701
 ἄπιος 94
 ἀπλυσία 85
 ἀποβάθραι 620
 ἀπογραφή 493, 497 f.
 ἀποδέκται 482, 486, 518
 ἀποδημία 403
 ἀποδύτηριον 696
 ἀποφειπεῖν 480
 ἄποια 96
 ἀποικία 543
 ἀπολείπειν, ἀπόλειψις, of a wife 661
 ἀπομαγαθαλία 693
 ἀποπέμπευ, ἐκπέμπευ, to divorce 661
 ἀπόπτγμα 671
 ἀποπνῶντι 477
 ἀπορία 242
 ἀπόρραξις 697
 ἀποτίμημα 662
 ἄπους 52
 ἀποφορά 540
 ἀποχειροτονία 453
 ἀραί 418
 ἀραλωσις 237
 ἀράχνια 80
 Ἄργαδεῖς 442
 ἀργυρογνώμονες 562
 ἀρετή, δημοτικὴ τε καὶ πολιτικὴ 253
 ἀριθμητικὴ 279
 ἀριθμοί, classification of 279
 ἀριστεία 593
 ἀριστινὸν 491
 ἀριστοι, ἀριστῆες 431

ἄριστον 664, 692
 ἄρκευθος 88
 ἄρκτος 47
 ἄρμονία (mus.), 152; varieties of 386; (naut.) 611
 ἄρμοσταί 464
 ἄρμύσνοι 470
 ἄρνευτήρ 63
 ἄρνός 46
 ἄρον 96
 ἄροτρον, αὐτογύες οἱ πηκτόν 685
 ἄρουραῖοι 44
 ἄρπη 50; (weapon) 405
 ἄρρηφορία 664
 ἄρρηφόροι 697
 ἄρτοπωλίδες 560
 ἄρτος 690; (δρίνδης) 91
 ἀρχαγέται 463, 466
 ἀρχεθεωρία, ἀρχεθέωρος 515
 ἀρχή 237, 273; κινήσεως 257
 ἀρχιτέκτων 558
 ἄρχων, ὁ 443, 444, 454, 482; ἐπώνυμος 449, 746
 ἀρώματα 105
 ἀσάμινθος 34
 ἀσκαλαβώτης 67
 ἀσκαλώνιον 98
 ἀσκαρῖς 79
 ἀσκοί 555, 691
 ἀσκλησιασμός 638
 ἀσκωμα 620
 ἀσπάλαθος 89
 ἀσπάλαξ 43 f.
 ἀσπάργος 89, 96
 ἀσπίδοιοι 558
 ἀσπίς 68, 589
 ἄσπρις 87
 ἀστακός 81
 ἀστερίας 59
 ἀστή 666
 ἀστήρ 85
 ἀστράγαλοι 638, 665, 697
 ἀστύνμοι 455
 ἀσύμμετρα 279
 ἀσφδέλος 90
 Ἄσθιδες 107
 ἀτιμία 485, 496, 498, 508
 ἄτομα, ἄτομοι 239
 ἄτρακτος, ὄνος 554
 ἀτρακτυλῖς 104
 ἀτσίδι 47
 ἀτταγᾶς 58
 ἀττέλαβος 79
 αὐλαξ 571
 αὐλή 709 f.
 αὐληταί 423
 αὐλητικὴ 150
 αὐλητρίδες 666
 αὐλίσκος 507

αὐλός 152, 391, 571, 645
 αὐλωδοί 423
 αὐταρκεία 433
 αὐτὸ ἀγαθόν 248
 αὐτογνώμονες 474
 αὐτοκράτορες 456
 αὐτονομία 433
 αὐτοπῶλαι 558
 αὐτοσχεδιαστικὴ 161
 αὐτουργοί 534
 αὐτόχθονες 109
 ἀφαιμῶται 533
 ἀφesis 500
 ἀφλαστον 611, 613 ff., 620
 ἀφορμή 562
 ἀφρακτοί 615
 ἀφύη 71, 690
 Ἄχαιῶν ἀκτὴ 728
 ἀχάτης 381
 ἀχερδός 94
 ἀχράς 94
 βάις 95
 βάλτη 669
 βάκκαρις 105
 βακτηρία 487
 βάκχαρ 105
 βαλανεῖα 641
 βαλανεύς 698
 βαλανηφόγοι 87
 βάλανος 87, 95, 487
 βαλαντιοῦχοι 496
 βαλαύστιον 94
 βάλερος 73
 βαλίς 46
 βάλασμος 98
 βάνασοι 682
 βάσανος 562
 βασιλεύς (ornith.) 52; (bee) 75; (polit.) 431 ff., 436, 443, 454, 482
 βασιλίσκος 52
 βασκάνια 632
 βασσάριον 47
 βατῖς 71
 βάτος 94; (Ἰδαία) 94
 βατραχιῶν 487
 βάτραχος 69; ὁ ἀλιεύς 71
 βαφεύς 554
 βαφικά 102
 βδέλλα 60
 βελόνη 71
 βελουκός 100
 βερβερίτα 44
 βήμα 507; a pace 570
 βιβλίδια 562
 βιβλιοθήκη 655
 βιβλος, βύβλος 649
 Βιοί Ὀμήρου 134
 βίττακος 53

βλιτον 96
 βολβός 96
 βολλίταινα 82
 βομβύλιος 75, 76
 βόναςος 46
 βοσκή 61
 βοσκή 93
 βόσμορος 91
 βοῦα 471
 βουαγοί 471
 βούγλωσσον 71
 βούκερας 92
 βούλευσις 491
 βουλευτήριον 457
 βουλή 431 f., 435, 438 f.,
 444, 452 f., 457; ἡ οἱ
 πεντακόσιοι 457; ἡ ἐξ
 Ἀρείου πάγου 459
 βουμέλιος 87
 βουριάς 96
 βοῦς, βόες ἀγριοί 46, 578
 βουστροφήνην style of writ-
 ing 741, 746, 752
 βράβυλος 94
 βράθυ 88
 βρέζα 91
 βρόμος 91
 βρύον 90; (θαλάσσιον) 90
 βρύσσοι 85
 βρυωνία 90
 βύας 51
 βύβλωνος 103
 βύβλος 103
 βυρσοδεψικά 102
 βύσσοι 84, 103, 675
 βωλίτης 97
 βωμός 417
 βῶξ 71

γαγγάμη (γάγγαμον) 74
 γάδαρος 46
 γαλεός ὁ λείος 72; ἐκ Ῥόδου
 73
 γαλεώτης 67
 γάλη 47
 γάλη ἀγρια 47
 γαμηλία 401; γαμηλιαν εἰς-
 φέρει τοῖς φράτερι 633
 γαμόροι 436
 γάρος 96
 γαῦλοι 614
 γείσον 306
 γέλιος 98
 Γελέοντες 442
 γενεαί 434
 γένη 108, 432, 436, 442,
 446
 γεννήται 442
 γέρα 494
 γέρανος 59

γέροντες (Homer) 473
 γέροντες βουλευφόροι 431
 γερούσια 432, 438, 463, 467
 γέρα 560
 γεφυρίζειν 428
 γεωμόροι (ἀγροικοί, γεωργοί)
 441, 445
 γεωνόμοι 545
 γηθυλλίς 98
 γήτειον 98
 γλάνις 73
 γλαυκίον 61
 γλαῦξ 51
 γλήχων 98
 γλυκισίδη 90
 γλυπτική 377
 γλύφανον 654
 γλώσσα (Ὀμηρικά) 136
 γνῶμαι 164
 γνώμονες (math.) 279; γνῶ-
 μων, sundial 626
 γνωρίσματα 632
 γόγγυρος 71
 γογγυλίς 96
 γογγυλοσπάραγον 96
 γόμφοι 611
 γραμμαί 642
 γράμματα, study of 642
 γραμματεῖα 562
 γραμματεῖον, ληξιαρχικόν 523,
 750; φρατερικόν 523; led-
 ger 562
 γραμματεὺς 487; κατὰ τὴν
 πρυτανείαν 458; τῆς βου-
 λῆς 458, 462; γραμματεῖς
 453
 γραμματικὴ 645
 γραμματιστής 642 f.
 γραμμῆ, ἱερά 697
 γραφή 493; δῶρων 483; μοι-
 χείας 483; παρανόμων
 447 f., 461 f., 483, 494;
 γ. προεδρικά καὶ ἐπιστα-
 τικά 483; ὕβρεως 483,
 537; ψευδεγγραφῆς 483;
 ψευδοκλητείας 483, 499;
 λειποταξίου 482; ξενίας
 483
 γραφίς 643
 γραφίς, γραφίδιον 642
 γρίφοι 74, 694
 γῆς 570 f.
 γυμνασιάρχη 515; γυμνα-
 σιάρχου 452, 515
 γυμνάσιον 636, 641
 γυμναστικὴ 641, 646, 696
 γυμνήσιοι 533
 γυμνόκριθον 91
 γυναικωνίτις 663, 665, 710 f.
 γύρνος 69

γύψ 50

δαγυδες 665
 δαίμων 634
 δάκτυλος (date) 95; a finger-
 breadth 570; διὰ δακτύ-
 λων 665; ἐκκλῆν τὸν δ.
 641; ἐπὶ δακτύλων συμ-
 βάλλεσθαι, πεμπαῖζειν 643
 δαμασκηνόν 94
 δάνειον ἐγγεῖον, ναυτικόν 562;
 δάνεισμα, δανεισμός 562,
 564; ναυτικόν δάνεισμα 564
 δάρκναι 478
 δασύπους 44
 δάφνη 89; (ἀλεξάνδρεια) 89
 δαφνηφόρια 403
 δείγμα, a hall 559; a sample
 555
 δειλή 626
 δέπνον 683, 692 f.
 δεκάδαρχοι 456
 δεκάδες 628
 δεκαρχία 440
 δεκάτη 513, 521, 561
 δελφίς 49
 δένδρα 87
 δεσμοτήριον 508
 δέσποινα 660
 δευτερίας 691
 δήμαρχος 452
 δημοουργοί 431, 441, 445,
 549
 δήμοι (δᾶμοι) 434, 446
 δημοκρατία ἐσχάτη 440
 δημοποῖητοι 451
 δήμος 439, 460, 481; (δᾶμος)
 435, 463
 δημόται 452
 διαβήτης 280
 διαγραφεὺς 514
 διαδικασία 494, 662
 διαζεύξεις (mus.) 385
 διάζομαι, ἀπτομαι 554
 διαζῶμα 425
 διάθεσις 275
 διαιτηταί, οἱ 485
 διάκριοι 445
 διάλεκτος, κοινή 726, 736
 διαλλακτής 444
 διαμαρτυρία 500 f.
 διάνοια 269, 274
 διαπύλιον 513, 561
 διασῆθω 556
 διασκευασταί 141
 διάτονον μαλακόν, σύντονον
 388
 διαύλος 422, 571
 διαχειροτομία 462
 διαψήφισις 451

- διαψηφισμός 446
 διδάκτρον 565
 διέκπλους 624
 δίεςεις 388
 διηγηρτικά 633
 δίδυρα 83
 διθύραμβοι 153, 155
 δικάζειν 478
 δικάσται, οἱ 487; κατὰ δὴ-
 μους 484
 δικάστηρον 454, 482, 485,
 487; ἐφέμειναι εἰς τὸ 481,
 485
 δίκη αἰκέλας 483; ἀπὸ συμ-
 βόλων 483; βιαίων 493;
 βλάβης 494, 537; δημοσία
 493; εἰς ἐμφανῶν κατὰ-
 στασιν 502; ἔμμηρος 505,
 561; ἐμπορικὴ 483, 486,
 493, 508, 564; ἐξαιρέσεως
 493; ἐξούλης 493, 509,
 562; ἔρανικαί 486; ἴδια
 493; κοινωνικὴ 486; λιπο-
 μαρτυρίου 502; μεταλλική
 483, 561; πρὸς τινα, κατὰ
 τίνος 494; ἀποστασίον 537;
 τὴν μὴ οὖσαν δίκην ἀντι-
 λαγχάνειν 510; τραπεζι-
 τικὴ 486, 561; φονικαί
 493; ψευδομαρτυρίων 501,
 510
 δίκκοκος 91
 δίκταμων 98
 δίκτυον 74
 δίνη 239
 διογενέες 431
 διοικήσει, ἐπὶ τῷ 517
 διοικητῆς 520
 διόπτρα 282
 διορισμός 280
 διόσανθος 90
 Διὸς βάλανος 95
 διοσημία 461
 διοτρεφέες 431
 δίπλαξ 673
 διπλοῖδιον, διπλοῖς 671
 δίπτυχα (τρίπτυχα etc.) 651
 δισκοβολία 641
 διατάδιον 571
 διφθέραι 650
 διχάς 570
 διωβελία 512
 διωμοσθαί 500
 δμῶες 531
 δοκιμασία 447, 453 f., 457 f.,
 459, 461, 648
 δοκιμασταί 562
 δοκιμαστήρες 519
 δόλιχος 92, 422
 δόναξ 104; ἐκ δονάκων 74
 δόξα, κενή 270; πρόσφατος
 274
 δορκάς = ζορκάδι 46
 δόρπον 692
 δόρυν 590; δ. νήιον 611
 δούλοιο 531
 δουράτεος 88
 δράκων 68
 δράμα, σατυρικόν 156; δρά-
 ματα 129
 δράσαντι παθεῖν 157
 δραχμή 575, 585, 744
 δρεπανίς 52
 δρέπανον 587, 590, 685
 δροκολάπτης 53
 δροσπερὶς 90
 δροσχοιο 611
 δρῦς 87
 δρώμενα 424, 428
 Δυμᾶνες 465
 δύναμις (philosophy) 185;
 (arith.) 279
 δυναστεία 438, 440
 δυσπεψία 100
 δωδεκάθεον 90
 δῶρον 570
 ξαρ 627
 ξβενος 87
 ἔγγειος οὐσία 662
 ἐγγυᾶν, ἐγγυᾶσθαι 661
 ἐγγύησις οἱ ἐγγύη 633, 661
 ἐγγυηταί 496, 562
 ἐγκεκτημένοι 452
 ἐγκέφαλος 95
 ἐγκλημα 499
 ἐγκρασίχολος 71
 ἐγκρίνειν 202
 ἐγκτησις γῆς καὶ οἰκίας 450
 ἐγκτητικόν 452
 ἐγκώμια 151
 ἐγχελευς 71
 ἔδνα, ἔεδνα 633, 657
 ἔδραι 457
 ἔθνος 264, 432
 εἶδος 248, 250, 256
 εἰδύλλιον 190
 εἶδωλα 270
 εἰκός 171
 εἰκοστήρης 622
 εἰκοστολόγοι 519
 εἰλειθία 401
 Ἐλλωτες 464, 532
 εἰρεσιώνη 403
 εἰς τὰς χύτρας, εἰς τοῦσον
 560
 εἰσαγγελία 460, 482 f., 493;
 δαιτητῶν 489; κακώσεις
 489, 493
 εἰσαγωγεῖς, οἱ 483, 486, 505
 εἰσαγωγίμος (οὐκ) 500
 εἰσιόν τε καὶ ἐξιών 256, 259
 εἰσιτήρια 419
 εἰσφορά 450, 511, 514, 516,
 520
 ἐκατόζυγος 611
 ἐκατόμπεδος 570
 ἐκατόν, symbol for 744
 ἑκατοστή 561
 ἐκδιδύναι 503
 ἐκδοσεῖς, loans 564; clas-
 sical texts 201; texts of
 Homer, αἱ κατ' ἄνδρα, αἱ
 κατὰ πόλεις, κωναί, δημῶ-
 δεις 136
 ἐκεχειρία 422
 ἐκθεσις of children 632
 ἐκκαϊδεκῆρεις 622
 ἐκκλᾶν τὸν δάκτυλον 641
 ἐκκλησία 439, 460; κυρία 453,
 460, 462, 489
 ἐκκρίνεισθαι 237
 ἐκκικλήμα 425
 ἐκλογεῖς 514
 ἐκλογιστῆς 520
 ἐκμαρτυρία 502
 ἐκπιέζω 686
 ἐκπύρωσις 273
 ἐκτέμνω 554
 ἐκτεύς 573
 ἐκτίμοροι 444 n.
 ἐκφορά 634
 ἐλαία 94; (Αἰθιοπική) 94
 ἐλαιοθέσιον 696
 ἐλάτη 88
 ἐλατηρίον 100
 ἐλαίνω 556 f.
 ἐλαφόβοσκον 96
 ἐλαφος 46
 ἐλέαγνος 89
 ἐλεᾶς 52
 ἐλεγείον 148
 ἐλεγος 148
 ἐλεγχος 242
 ἐλεδώνη 82
 ἐλειός 44
 ἐλειος 44
 ἐλειόχρυσος 90
 ἐλελισφακον 98
 ἐλένιον 90
 ἐλευθερία 433, 439
 ἑλική 87
 ἐλκεχιτῶνες 669 f.
 ἐλκυστίνδα 638
 ἔλκω 554, 557
 ἐλλέβορος 101
 ἐλλμμένιον 513, 561
 ἔλλωφ 73
 ἔλλωτῆς 89
 ἔλμμος 91

ἔμβας 678
 ἔμβατεύειν 509, 562
 ἔμβλημα 376, 379
 ἔμβολή, ἔμβολον 605, 624
 ἔμβόλιμος 747
 ἔμβολος 620
 ἔμπαιστική 377
 ἔμπειρικοί 231
 ἔμπέλωροι 470
 ἔμπις 79
 ἔμπορος 508, 549, 558
 ἔμυς 66
 ἐν with accusative 745
 ἐν παραστάσει 307
 ἐν ταῖς λαχάνοις 560
 ἐναγίσματα 634
 ἐνάργεια 174
 ἐναρμόνιον 388
 ἐνατα 634
 ἐνδείξεις 483, 496
 ἐνδεκα, οἱ 455
 ἐνδρομίδες 678
 ἐνδρον 685
 ἐνδύματα 670 f.
 ἐνεπισκήπτεσθαι 493
 ἐνέχυρον 562; ἐνέχυρα λαβεῖν,
 ἐνεχυράειν 509
 ἐνθρυσκον 96
 ἐνναετήρις 630
 ἐννοήματα 272
 ἐντασις 303
 ἐντελέχεια 185
 ἐντομα 75 ff.
 ἐνυδρις 47
 ἐνωμοτία, ἐνωμοτάρχης 597
 ἐξ with dative 745
 ἐξαιτέω 503
 ἐξηγηταί 455
 ἐξήρεις 622
 ἔξις 273, 275
 ἐξέδμυνσθαι 502
 ἐξωμύς 554, 671
 ἐξωτικά 105
 ἐπαγωγή 260
 ἐπαῖνευ with dative in in-
 scriptions 745
 ἐπακτρίδες 616
 ἐπανάγειν 242
 ἐπέτεια 517
 ἔπη 129, 150
 ἐπηγκεινίδες 611
 ἐπ' αὐτοφώρῳ 496
 ἐπὶ δραχμῇ 562
 ἐπὶ τομίῳ ὀμνύει 418
 ἐπιβλήματα 670, 673
 ἐπιβολή (archit.) 306; ἐπι-
 βολαί, fines 482; ἐπιβολὰς
 ἐπιβάλλειν 453
 ἐπιγράμματα, varieties of 197
 ἐπιγραφεῖς 514

ἐπιδημία 403
 ἐπιδημιουργοί 546
 ἐπιδικασία 662
 ἐπίδικος 501
 ἐπίδοσις 511
 ἐπικλήρος 474, 662
 ἐπικός 129; κύκλος 144
 ἐπικριον 611
 ἐπιλαβεῖν τὸ ὄδωρ 506
 ἐπιλαχόντες 454, 457
 ἐπιμελεῖσθαι with dative in
 inscriptions 745
 ἐπιμεληταί 516, 548; τῶν δι-
 καστηρίων 449; τῆς φυλῆς
 452; τοῦ ἔμπορίου 455, 482,
 497, 561; τῶν μυστηρίων
 455
 ἐπιμήλις 94
 ἐπινομία, ἐπινομίαι 151 f.
 ἐπίξανθος 44
 ἐπίπεροι 44
 ἐπίσημον 620
 ἐπισκήπτεσθαι ταῖς μαρτυρίαις
 510; ἐνεπισκήπτεσθαι 493
 ἐπίσκηψις 474
 ἐπίσκυρος 697
 ἐπιστάται τῶν δημοσίων ἔργων
 (ἀποστολεῖς, ζητηταί, ἱερῶν
 ἐπισκευασταί, κρηνην ἐπι-
 μελητῆς, ὁδοποιοί, σιτώναι)
 454
 ἐπιστάτης 462, 521; τῆς ἐρ-
 γασίας 565; τῶν προέδρων,
 τῶν πρυτάνεων 457
 ἐπιστύλιον 306
 ἐπιτιμία 451
 ἐπίτονος 611
 ἐπίτροποι 684
 ἐπιχειρονομία 453, 460 f.;
 νόμων 462
 ἐπιψήφισις 747
 ἐποποιός 165
 ἐποπτεία 428
 ἐποχή 276
 ἐποψ 55
 ἐπτήρεις 622
 ἐπωβελια 493, 500
 ἐπώνιον 561
 ἐπωτίδες 620, 624
 ἔρανος, a society 416, 563;
 a meal 695; a loan 486
 ἐργαστήρια 556, 559
 ἐρέβυνθος 92
 ἐρεικη 89
 ἐρεμά 611
 ἐρευθεδανον 102
 ἐρήμην ὀφλισκάνειν 499
 ἐρίθακος 52
 ἐρινάζειν 94
 ἐρινεός 94

ἐρινόν 94
 ἔριον 554
 ἔριματα μακρὰ 611
 ἔρπυλλος 90
 ἐρυθρῖνος 71
 ἐρυθρόδανον 102
 ἐρυθρόν 102
 ἐρυθρόπους 60
 ἔρωδιός 59
 ἔρωις 168
 ἔρωτικὸς 233
 ἔσκιατραφῆκώς)(ἠλυμένως
 641
 ἔσπερα 626, 683
 ἔσπερῶδων μήλα 94
 ἔσπεριοί 587
 ἔστια 412, 417, 709 f.
 ἔστιασις, ἔστιάτωρ 515
 ἔσχάρα 417, 709
 ἑταῖρα 666 f.
 ἑταιρεῖαι 563
 ἑταιρία 477, 480
 ἑταιροί 431
 ἑτερολωσις 274
 ἑτερόπλους 564
 ἑτυμόδρις 87
 εὐανδρία 420
 εὐδαιμονία 262
 εὐεργέτης 747
 εὐζωμον 96
 εὐθυδικία εἰσιέναι 502
 εὐθυμία 271
 εὐθυναί, εὐθυνοὶ 444, 453, 457,
 459, 461
 εὐναί 611
 Εὐπατρίδα 441, 445, 474
 εὐρσις 185
 εὐσσελλμος 611
 εὐσημία 418
 εὐχεσθαι 418
 εὐώδης 88
 ἔφεις 176, 444, 481
 ἐφέται 491
 ἐφηβεία 648
 ἐφηβείον 648, 696
 ἐφηβοί 449, 451, 523, 648
 ἐφήγησις 496
 ἐφημερίδες 562
 ἐφίπτιον 591
 ἐφοροί 469
 ἔφωγον κακόν, εὐρον ἀμεινον
 633
 ἐχηνῆς 71
 ἐχνομήτρα 85
 ἐχίνος, hedgehog 42; (ὁ
 ἐσθλίμενος, ὁ λευκός) 85;
 (archit.) 306; casket 485
 ἔχσις, ἐχιδνα 68
 ἔχματα 611
 ἔψω, ὀπτάω 556

ἔως, the dawn 626

ζέα 91

ζευγύται 444, 611, 618 ff.

ζεύγλη 620

ζῆν ὁμολογουμένως τῇ φύσει

275

ζορκάδι 46

ζυγά 611, 618 f.

ζυγία 87

ζυθός 91, 691

ζώνη 672

ζωστήρες 618

ζωφόρος 306

ἡγεμόνες (archit.) 306; τῶν

δικαστηρίων 482

ἡγεμονικόν, τό 266, 273 f.

ἡγεμών 514; (bee) 75

ἡδονή, ἡ ἐν κινήσει, ἡ κατα-

στηματική 271

ἡδύοσμον 98

ἡθοποιία 174

ἡλακάτη 554

ἡλεκτρον 556

ἡλιασταί 487

ἡμέρα, μέση 626; ἡ κυρία 485;

ἡ προθεμία 509; days of
the month 628

ἡμερίς 87

ἡμεροδανεισταί 562

ἡμιάμορον (ἡμικάδιον) 573

ἡμιέκτον 573

ἡμιλάγος 44

ἡμιολία 622

ἡμιόνιον 90

ἡμίονος 46

ἡμιπόδιον 570

ἡμίχους 573

ἡμιώβολον 575, 744

ἡρῶν 635

ἡρως 158

ἡχέτης 78

θαλαμίται, θαλάμακες, θαλά-

μοι 618 ff.

θάλαμος 619, 711

θάμνοι 89

θαργήλια 403

θέατρον 425

θέμις, θέμιστες 473

θεοί, ἀγοραῖοι, ἐφέστιοι or

μύχιοι 417; ἐγχώριοι 633

θεολογέιον 425

θέρμος 92

θέρος 527

θεσμοθέται 443, 454, 483

θεωρία (philos.) 262; θεωρία

422

θηλυπτερίς 90

θησαυρός 520, 709

θῆτες 431, 444, 531

θλασι 244 n., 416

θλάω 686

θοίνη γαμικῆ 633

θολός 457

θρανῖται 618 ff.

θρέματα 665

θρήνος 128, 151

θρήνυς 611, 618 f.

θρηνησοῖ 634

θριαμβος 155

θρίδαξ 96

θρίναξ 71

θρόνοι 222

θύμβρα 98

θυμίαμα 100

θύννος 71, 690

θυνδόσκοποι 71

θύρσος 88

θυρρωρεῖον 711

θύραξ 589

θύς 47

ζαμβος 149

ιασπίς 381

ιατρεῖον 722

ιατρὸς ὑπηρέτης τῆς φύσεως

722

ἰδέα 248

ἰδιολογία 270

ἴδιος λόγος 520

ἰερά, καλλιερεῖν 418, 426

ἰερεῖον 690

ἰερεῖς 455

ἱερομνήμονες 630

ἱερόν 417

ἱεροποιοί 455, 521

ἱερός γάμος 401

ἱερωσύνη 494

ἱκρια 611

ἱκτις 47

ἱκτ[ισ]ίδιον 47

ἱλαι 471

ἱλαρχοί 471

ἱλιάς μικρά 144

ἱλίου πέρις 144

ἱμάντες 620; (μειλίχαι) 423

ἱμὰς δέξυς 422

ἱμάτιον 669, 673 ff., 677,

679

ἱξοβόρος 52

ἱξός 89

ἱόν μέλαν 90

ἱούλος 80

ἱππαγωγός, ἱππηγός 620

ἱππαρχοί 456

ἱππεῖς 436, 444, 594; σαρι-

σοφόροι 591

ἱππικόν 571

ἱπποβοταί 436

ἱππόβοτος Λιβύη 46

ἱπποι (relig.) 395 a

ἱππος 46

ἱππος ὁ ποτάμιος 46; (crab)

81

ἱππουρίς 90

ἱρᾶνες 471

ἱσηγορία 439

ἱστουργικά 103

ἱσθικόν 102

ἱστάτις 102

ἱστοελῆς 450

ἱσονομία 439

ἱσότης 439

ἱστίη 709

ἱστίον 611, 620

ἱστοδόκη 611

ἱστοπέδη 611

ἱστόποδες 554

ἱστός, upright loom 554;

(naut.) 611, 620

ἱσχάς 94

ἱτέα 87; (μέλαινα, λευκή,

ὠλεσίσκαρπος) 87

ἶτον 97

ἱνγξ 53

ἱφουν 90

ἱχθυώνων 75

ἰωνία 90

κάδιος ἀπολύων, ἀπολλύς

507

καδμεία 556

καδοποιοί 558

κάθορασις 185

καθέδρα 663

καθετή 74

καθῆκον, μέσον 275

καθόλου 259

καίριοι 554

κακοῦργοι 406

κάλαθος 554

καλάμινα 104

κάλαμος 104, 642, 654

κάλια 47

καλλίας 42

κάλλιχθος 71

καλλιάνυμος 71

κάλοι 611

καλὸν 274; καλὸς καὶ ἀγαθὸς

261

καλοὶ κάγαθοὶ 168, 465, 467

καλὸς-names 365

καλυπτήρες 306

καλύπτρη 669

κάλως 620

κάμηλος 46

κάμνος 556

κάμψη 76

καμψιούρος 44
 κάναβος 556
 κάνθαρος 71, 77
 κάννα 104
 κάναβις 103
 κανούν 418
 κανών, Alexandrian 202;
 cross pole 554; ruler 280,
 654
 κάπηλοι 559
 κάπρος 46
 κάραβος 77, 81
 καρδαμίνη 96
 κάρδαμον 96, 98
 καρῖς 81
 καρκίνιον 81
 καρκίνος 81
 καρποφόρα 94
 καρτάν 98
 καρύα (κάρνον) 95; (ήρακλεω-
 τική) 95
 καρνώτις 95
 καρχαρίας 72
 καρώ 98
 καρωτόν 96
 καστανακόν κάρνον 95
 κάστωρ 44
 κατάβλημα 620
 καταβολά 518
 καταθέμενος, ὁ 479
 κατακείμενος, ὁ 479
 κατακοιμητικά 633
 κατάληψις 274
 καταλλαγή 562
 κατάλογος 523
 καταπάλται 607; πετροβόλοι,
 ὄξυβελείς 609
 κατάρξασθαι 418
 καταστηματική 271
 κατάφρακτοι 615
 καταχύσματα 633
 κατηγοριῶν, γένη οἰ σχήματα
 τῶν 272
 κατιέμαι 496
 κατόρθωμα 275
 κατωανακοφόροι 533
 κάχυρος 91
 κεβλήπυρις 52
 κέγγρος (botan.) 91; alloy of
 silver 556
 κεδρίς 88
 κεδρόμηλον 94
 κέδρος 88, 94
 κείρεσθαι τὸν μύστακα καὶ
 προσέχειν τοῖς νόμοις 469
 κελέοντες 554
 κελεύς 53
 κέλητες 616
 κεραῖαι 615; ἀκάτεια, μεγάλαι
 620

Κεραμεικός 565
 κεράμια 99
 κέραμος (archit.) 306; earthen-
 ware 557
 κέρασος 94
 κεράτια 93
 κερκίς, aspen 87; shuttle 554;
 κερκίδες, seats at a theatre
 425
 κέρκουροι 616
 κερωνία 93
 κεστρεύς 71
 κεφαλαλήτης 91
 κέφαλος 71
 κεφαλωτόν 98
 κηκίδες 87
 κηπευτικά 99
 κήποι at Athens 687
 κηριάξειν 83
 κηρύκειον 405
 κήρυλος 54
 κήρυξ 83, 453
 κήτος 49
 κηφήν 75
 κίβδος 556
 κιβώριον 92
 κιβωτὸς δημοσία, ἱερά 655
 κιθάρα, κίθαρις 152, 391,
 645
 κιθαριστής 423, 645
 κιθαρίστρια 666
 κιθαρωδική 150
 κιθαρωδοί 150, 423
 κινάρα 96
 κινήσις 271
 κιονόκρανον οἰ κικόκρανον 306
 κίστρις 654
 κίσθος 89
 κίσσα 52
 κισσός 89
 κίτριον 94
 κίχλη 52, 71
 κιχόριον 96
 κίων 306, 369, 635
 κλαρώται οἰ φοικέες 533
 κλέπται 496
 κλειψύδρα 506, 626
 κλήθηρη 87
 κληῖδες 611
 κληναί 560
 κληῖρος 75, 114, 465, 472,
 474, 501, 532, 548
 κληρουχία 548
 κληῖρωσις ἐκ προκρίτων 444
 κληρωτήρια 487
 κληρωτοί 450
 κλήσις 499
 κλήτευσις 502
 κλητῆρες 499
 κλιμακες, κλιμακίδες 425, 620

κλίνη, a sofa 663
 κλινοποιοί 558
 κλώθω 554
 κλωστήρ 554
 κνημίδες 589
 κνίδαι 85
 κνιπολόγος 53
 κόγχη 84
 κόθοροι 425, 678
 κοινόν, τὸ (τῶν Θεττάλων)
 434 f.
 κοινωνία 248
 κόιξ 95
 κοκάλια 83
 κόκκος βαφικὴ 102
 κοκκυμηλέα 94
 κόκκυξ 56, 71
 κολεόπτερα 77
 κολλίας 71
 κόλλα 91
 κόλλαβος 575
 κολλητικά τραυμάτων 100
 κόλλυβος 562
 κολοῖς, jackdaw 52; little
 cormorant 63
 κολόκυνθα 96
 κόλπος 671
 κολυμβήθρα 698
 κολυμβίς 63
 κολυχικόν 101
 κόμαρος 94
 κόνδυλος 570
 κόρυκλος 44
 κοιστήριον 696
 κοντός 611, 620
 κόνυζα 74
 κοπίς 590
 κόραι 369 ff., 557, 665
 κορακίας 52
 κοράλλιον 85
 κόραξ, raven 52; cormorant
 63
 κορδύλος 69
 κόριον 98
 κόρις 79
 κοροπλάθει 557
 κορυδαλλός 52
 κόρυμβα, ἄκρα 611
 κορινθηφόροι οἰ κατωανακοφόροι
 533
 κόρυς 589
 κορώνη 52; ἡ θαλασσία 62
 κοσμηταί 451, 648
 κόσμος, discipline 469; society
 463; ὁ κόσμος at Gortyn
 478, 746
 κόσσυφος 52, 71
 κότερος, κῶς, etc. not found
 on inscriptions 730
 κότυνος 94, 422

κούρταβος 694
 κοτύλη = τρύβλιον and ἡμίνα
 573
 κουκούφα 55
 κουνάδι (= κυνίδιον) 47
 κουρέια 683
 κούρμι 91
 κοχλίας (πωματίας) 83; (screw)
 281
 κόχλος 83
 κόψιχος 52
 κράγγων 81
 κραμβασπάρατος 96
 κράμβη 96
 κράνεα 94
 κρανοποιοί 558
 κράσις δι' ὄλων 273
 κρέξ 60
 κρήδεμον 669
 κρήματα 480
 κριθή 91
 κρίθος 685
 κρίκος 685
 κρίμων 91
 κρίνον λευκόν 90; (πορφυροῦν)
 90; (ἡμεροκαλλές) 90
 κρύος, κρύος ἄγριος 46
 κροκή 554
 κροκόδειλος, χερσαῖος 67
 κρόκος 90, 102
 κροκυδίξ 554
 κρόμμυον 98
 κρόταλον 638
 κρούα 554, 557
 κρυπτεία 532
 κρύσταλλος 381
 κτεῖς 84, 554
 κύαθος 569, 572
 κύαμος 92; ὁ Αἰγύπτιος 92
 κύανος 556
 κυβερνήτης, κυβερνητήρ 611
 κύβοι 279, 697
 κυδωνέα 94
 κυδώνιον 94
 κύκλοι 560
 κύκνος 61; κύκνοι (naut.)
 616
 κύλιξ 694
 κύλις 641
 κύλλαρος 81
 κύμα, κυμάτιον 306
 κύμνδις 51
 κύμμον 98
 κυμνο-πριστο-καρδαμο-γλύφος
 98
 κυνέη 589
 κυνηγετεῖν 688
 κυνόσβατος 94
 κυπάρισσος 88
 κύπειρος 105

Κύπρια 144
 κύπρινος 73
 κύριος 264; legal representa-
 tive of a minor, etc. 493,
 633, 661 f.
 κύρτος 74
 κύτινος 94
 κύτισος 93
 κύφαι 81
 κύψελος 52
 κύων 47
 κωλακρέται 443, 518
 κωμάζειν 694
 κόμη 161, 264, 432
 κώμος 161, 694
 κωμώδια 161
 κώνειον 101
 κωνοφόρα 87 f.
 κάπη 611; κῶπαι θρανιτικά
 622
 κυρνώδη 87

 λάβραξ 71
 λαγίδιον 44
 λαγωβάλλον 413, 688
 λαγώς 44; ὁ θαλάττιος 83
 λαῖται 554
 λαῖος 52
 Λακεδαιμόνιοι, οἱ 465; τὸ
 κοινὸν τῶν Λακεδαιμονίων
 472
 λαμπαδηδρομία 515
 λαμπυρίς 77
 λαμψάνη 96
 λάπαθον 96
 λάρος 62
 λάταξ, λατάσσειν 44, 694
 λαύρη 709
 λαχανηρά 96
 λάω 726
 λέβητες 475, 752
 λεγόμενα 428
 λείριον 90
 λειχὴν 90
 λεκισπωλίδες 560
 λεκτόν 272
 λέξις 171, 185; εἰρομένη,
 κατεστραμμένη 172; λιτή
 or ἀφελής 174
 Λεονταφόρος, ἡ 622
 λεπτάς 83
 λεπιδωτός 73
 λεπτός 556
 λεπτορίς 44
 λέσχαί 683
 λευκαία 103
 λευκερωδῖος 59
 λέυκη 87
 λευκότης 90
 λευκόλιον 103

λέυκωμα 499
 λέων 47
 ληκυθοποιοί 558
 λήκυθος 634, 698
 λήμμα 780
 ληνός 686
 ληξιαρχοί 460; ληξιαρχικόν
 γραμματεῖον 451
 λήξις 499
 λητουργίαι 515
 λιβανωτίς 89
 λιγδός 556
 λιθάργυρος 556
 λιθόδενδρον 85
 λίθος, τρητός 611; λίθοι, pieces
 in a game 697
 λικνον 632, 685
 λιμνόστρεα 84
 λίνον 103
 λιποταξίον (γραφή) 482
 λῖς 47
 λιχανός, μέσων, ὑπάτων 385
 λογεῖον 425
 λογιαστής 449, 453, 458
 λογιαστική 278
 λογογράφος 165, 167, 172,
 506
 λογοσοῖός 165 f.
 λόγος in physics 273; Ἄδικος
 of Aristophanes 163; ὀρθός
 274; ψιλός 165; λόγοι of
 Demosthenes 177; λόγοι
 = definitions 242, 248

 λουτρόν 696
 λουτροφόρος 633
 λοχαγοί 456, 597
 λόχος 597
 λυγγούριον 381
 λυγίσειν 641
 λύγξ 47
 λύγος 89
 λύκιος, λύκειος 396
 λύκος 47
 λύκος ὁ ξανθός 47
 λύρα 152, 391, 645
 λυρικός 150
 λυχνίς 90
 λυχνων ἀφαί 626
 λώπη 669
 λωποδύται 496
 λωτός 87; (τριφυλλος) 93

 μάγαδις 391
 μάζα 91
 μαῖα, μαϊεύτρια 81, 632
 μαίτυρες 477
 μαλάβαθρον 105
 μαλάκια 82
 μαλακόστρακα 81
 μαλάχη (μολόχη) 96

μανδραγόρας 101
 μάνης 694
 μαντική 426
 μάντις 96
 μάνωσις 237
 μάραθρον 98
 μαρτυρεῖν 662
 μάχαϊρα 590
 μέγα βιβλίον μέγα κακόν 649
 Μεγαρέων δάκρυα 98
 μέγαρον 709 f.
 μέδιμνος 573, 587
 μέθεξις 248
 μειλίχη 422
 μελαγκόρυφος 52
 μέλαινα (naut.) 612
 μέλαν, ink 612, 654
 μελανόκον, μελανδοχείον 654
 μελάνθιον 98
 μελεαγρίς 58
 μέλη 129
 μελία 87
 μελίνη 91
 μελινοφάγοι 91
 μέλισσα 75, 587
 Μελιταία κνωϊδία 47
 μελιτοῦσσα 634
 μελλήρανας 471
 μελοποιός 150
 μέλος 150
 μεμβράς 71
 μέρη (Boeot.) 435
 μέροψ 56
 μέσαβον 685
 μέση, ἡ (mus.) 385 f.
 μεσημβρία 626, 683
 μεσπίλον 94
 μετακόσμη 270
 μέταλλα (μεσοκρινεῖς, μεταλλείον, ὄρυζοι, ῥαβδοί, στόμιοι, σύριγγες, ὑπόνομοι, φλέβες) 556
 μεταξύ τι 237
 μέταυλος θύρα 711
 μετεωρολογικά 281
 μετοίκιον, τό 450, 513, 565
 μέτοικοι 450, 537, 565
 μετόπαι 306
 μέτρα 569; ξηρά and ὑγρά, varieties of 573; μέτρον in verse 787, 789 f.
 μετρητής 573
 μετρονόμοι 455, 561
 μή κωμωδεῖν ὀνομασί 164
 μηδική 93
 μήκων 91, 101
 μηκώνιον 101
 μηλέα, apple-tree 94, 586 f.
 μηλολόβη 77
 μήλον 587

μήλον μηδικόν 94
 μήν (κόλλος, πλήρης) 628;
 list of Attic months 629
 μηρύματα καλωδίων 620
 μηρύομαι 554
 μηχανή (of a theatre) 425;
 μηχαναί, siege-machines 605
 μιλαξ 89
 μίλος 88
 μιμαίκυλον 94
 μίμησις 185, 248
 μιμίαμβοι 195
 μίμος 161, 190
 μίμω 42
 μίση 98
 μίξων 71
 μίτοι 554
 μίτρα 589
 μῆα 575, 744
 μνάμων, ὁ 477; ὁ τῷ κενεῖν 480
 μυαῖται 533
 μόδιος 573
 μόθakes οἱ μόθωνες 532
 μοιχάγρια 479
 μόλιβδος 654
 μολυβδαῖδες 74
 μονόθυρα 83
 μονώδαι 159
 μορέα 94
 μορία 94
 μόρον 94
 μορφή 256
 μουσεῖον 244 π.
 μουσική 641 f., 645 f.; πνεῦμα, τόνος and χρόνος in, 645
 μύθους 428
 μύθος 244
 μύια 79
 μύσκα 84
 μύκτηρος 95
 μύκτες 97
 μύραινα 71
 μυρική 89
 μύρμηξ, an ant 75; a boxing instrument 422
 μύρον 105
 μύρσινη 89; (ἀγρία) 89
 μύρτος 89
 μύς 84; ὁ ποντικός 44
 μυστήλη 693
 μύσψ 79
 μῶλον 100
 ναοποιοί 521
 ναός 417
 νάρδος 105
 ναρόδοσταχος 105
 ναρθηκοφόροι 104

νάρθηξ 104
 νάρκη 72
 νάρκισσος 90
 ναύαρχος 470
 ναύκληρος 682
 ναυκραρῖαι 444
 ναύκραροι 443
 ναύλον 634
 ναυτίλος 82
 νεκύδαλος 76
 νεκύσια 634
 νενικαμένος, ὁ 479
 νεοδαμώδεις 532
 νέρτος 50
 νέω 554
 νῆες, colours, form, speed, and build of Homeric 612;
 νῆας πῆγνυσθαί ἀραιάς 613;
 μακραί, στρογγύλαι 614;
 τρίκροτοι 617, 619; τρί-
 σκαλμοι 619; ἐξήρεις, ἐκ-
 καιδεκῆρεις, etc. 622 f.
 νῆμα 554
 νῆριον 89
 νηρίτης 83
 νῆσσα 61
 νῆτη, ἡ, διεzeugμένων, συνημ-
 μένων 150, 385
 νόμιμα 463; ἀγραφα 474
 νομοθέται 462, 474
 νόμοι (laws) 264, 462, 474;
 ἐπ' ἀνδρὶ 460; θετικοί 474;
 νόμος εἰσαγγελτικός 489
 νόμοι (hymns) 150; (πυθικός) 423
 νομοφύλακες 449
 Νόστος Ὀδυσσεύς 143; Νόστοι in Epic Cycle 144
 νομηγία 628, 630
 νοῦς 239, 274; παθητικός, ποιητικός 258
 νυκτηρίς 42
 νύμφη 47
 νύξ 626; μέσαι νύκτες 626, 683
 νυφίτσα 47
 νυχθήμερον 626
 ξάλινω 554
 ξαναγοί 598
 ξηνηλασίαι 464
 ξενικόν τέλος 513
 ξενάνες 711
 ξέστης 573
 ξιφίας 71
 ξίφιον 90
 ξίφος 590
 ξόανα 375
 ξυλόφορος 76
 ξύστρα 698

- ὁ ἐφ' ὕδαρ 506
ὀβολός 575, 585, 744; ὀβελοί
at Gortyn 475, 478
ὀβολοστάται 502
ὄγκος 158, 425
ὄγκη 94
ὄδος ἄνω κάτω 273
ὄζολις 82
ὄη (οἴη) 94
οἱ εἰς ἔμποριαν οἰχόμενοι 563
οἱ μισθούμενοι τὰ δημόσια 508
οἱ πλείοντες, συμπλείοντες 559
οἱ χωρὶς οἰκοῦντες 540
οἶαξ 620
οἶηιον, οἶηια 611
οἶηης 531
οἶκημα, τό 508
οἶκία 264
οἰκιστής 395 a, 545
οἰκονόμοι 520
οἶκος 432
οἰκότριβες 536
οἰνάνθη 90, 94
οἰνάς 57
οἶνος 94; colours and cha-
racters of 691
οἶσ, 46
οἶστρος 79
οἶστυπος 554
ὀκταετηρίς 630
ὀλιγαρχία ἄκρατος 440
ὀλκάς 614
ὀλολυγμός 418
Ὀλυμπίας 107
ὀλυθος 94
ὀλυρα 91
Ὀμηρίδαι 134, 141, 143
Ὀμηρικοί, οἱ ἀρχαῖοι 135
Ὀμηρικώτατος, appellation of
Herodotus 730
ὀμογάλακτες 442
ὀμοιοί 465, 527
ὀμφαλός (of a mime) 154;
navel of the earth 403;
of the cylinder of a papy-
rus volume 654 f.
ὀμφαξ 381
ὀμωμύται 477
ὄν, μή ὄν 238
ὄναργος 46
ὄνόματα (gram.) 642
ὄνος 46; and βασιλεύς, in a
game 697
ὄνος ἄγριος 46
ὄνούχιον 381
ὄξύβαφον 573
ὄξύη 87
ὄξύκεδρος 88
ὄξύρρυγχος 73
ὄπισθόγραφα 649
- Ὀπλητες 442
ὀποπάναξ 100
ὀπός 100 f.
ὀπτάω 557
ὀπώρα 627
ὀργάζω 557
ὀργεῶνες 442
ὀργυια 570 ff., 625
ὀρεινός 44
ὀρεύς 46
ὀρθοπέεια 171, 647
ὀρθόκραραι, κορωνίδες 611
ὀρθότης ὀνομάτων 171
ὀρθρος 626, 683
ὀρίγανος 634
ὀρκια τέμνει 418
ὀρκιότερον ἤμην 477
ὀρκυς 71
ὀρμητή, πλεονάζουσα 274
ὀρμητῶν πολυαγκίστροι 74
ὀρνεον 50
ὀρνις 58
ὀροβος 92
ὀρσοθύρη 709
ὀρτάλιχος 58
ὀρτυξ 58
ὀρτύματα 608
ὀρυζα 91
ὀρφέος 71
ὀρχήστρα 425
ὀρχίλος 52
ὄσον ἐνδέχεται ἀθανάτιζεν 185
ὄστολόγιον 634
ὄστρακισμός 460
ὄστρακόδερμα 83
ὄστρακον 99, 557
ὄστρεα 84
ὄστρύα 87
ὄν ἕνεκα (philos.) 257
ὄλλη 96
ὄλλοχύται 418
ὄλυρα 570
ὄλυρανία 697
ὄλς θαλάττιον 83
ὄυσία 185, 273
ὄφθαλμοί (naut.) 620
ὄφης 65, 68
ὄχανα 589
ὄχλοκρατία 440
ὄψα 98
ὄψέ, 626
ὄψον 102, 689
- πάγουρος 81
παθητικὸς νοῦς 258
παιδαγωγίον 640
παιδαγωγολί 640
παιδεία 643
παῖδες 471; ἀμφιθαλὴς παῖς 633
παιδονόμος 470 ff., 637
- παιδοτρίβης 641, 646
παλαιῖον 641
παλαιστή 570
παλαιστρα 641, 696
πάλη 91
πάλη ὀρθή 641
παλλίουρος 89
παλλακὴ 656, 666
Πάμφυλοι 465
πάνακες 100
πανδοκεῖον 700
πανδοκεῦτρια 700
πανηγύρεις 560
Πανιώνιον 547
παννυχίδες 664
πανσπερμία 239
πάντα λίθον κινεῖν 697
πάντα ρεῖ 237
πάπρακες 73
πάπυρος 649
παράβασις 163
παραβλήματα 620
παραγραφή 493, 500
παράδειγμα 260
παραδιδόναι 503
παρακαταβολή 493, 499
παρακαταθήκη 562
πάραιλοι 445
παραμῆση (mus.) 385 f.
παρανήτη, ἡ, διεξευγμένω,
συνημιμένω 385 f.
παράνυμφος 633
παραρρύματα λευκά, τρίχυνα
620
παρασάγγης 571
παράσημον 620
παρασκήνιον 425
παράστασις 493, 499; ἐν
παραστάσιν (archit.) 307
παράσταται 620
παρατελχισμα 606
παραφράγματα 616
πάρδαλις 47
παρέγκλισις 270
παρεκβάσεις 171, 264
παρεξείρεσις 620
παρθένος 667
Παρνασσός 34
πάρουψ 79
πάρουδι 425, 618, 622
παρουσία 248
πάρουχος 633
Παράραιοι 435
παρυπάτη μέσων, ὑπάτων 385,
388
πᾶς: πάντα ρεῖ 237; πάντων
εὐρετῆς χρόνος 260
πάστας 477, 480, 710 f.
πατριά 434
πατρωνόμοι 472

- πατριώκος 480
 πεδείς 445
 πεδινός 44
 πέξα 74
 πέξις 97
 πέυμα, πεσματα 611
 πελαργός 59
 Πελασγών ἔδρανον 37
 πέλεια 57; priestess of Do-
 dona 426
 πελεκᾶς 53
 πελεκίνος 63
 πέλλος 59
 πελώρια 84
 πενέσται 434, 533
 πένταθλον (ἄκοντα, ἄλμα, δίσ-
 κον, πάλην, ποδωκλίην) 422
 πεντακκοσιμέδιμοι 444
 πεντηκόντοροι 614
 πεντηκοστή 513, 561
 πεντηκοστὸς 597
 πεντήρεις 621
 πέπερι 105
 πέπλος 671
 πέπων 96
 περαίας 71
 πέριδιξ 58
 περί λυχνῶν ἀφάς 626, 683
 περί ὕψους, work of doubi-
 ful authorship 221, 802
 περιάκτοι 425
 περιδειπνον 634
 περικλύμενον 89
 περιλέω 620
 περιουσίης 422
 περίοικοι 464, 532
 περίπλους 624
 περιστέρα 57
 περιστερέων 57
 περιχώρησις 239
 περικύπτειρος 50
 περονάτρις 671
 περόνη 671
 περσαία 101
 πέρσειον 101
 περσικαί 678
 πέσσοι 697
 πέταλον 556
 πέτασος 592, 677
 πεττεία 665
 πεύκη 87 f.; (ἡμέρος) 88;
 (παράλια) 88; (Ἰδαία) 88;
 (καλή) 88
 πήγανον 98
 πήδάλιον 611, 620
 πηδόν 611
 πήκτις 391
 Πηλαγὸς 71
 πηνέλοψ 61
 πηνίον 76, 534
 πήχυς 570
 πῆθος 42
 πίθιοι 686, 691; πιθουλία 691
 πῖλος 589, 677
 πινάκιον 487
 πῖναξ ἐκκλησιαστικός 451,
 523; πῖνακες (theatre) 425;
 library catalogues 655
 πῖναξ 84
 πιννοθήρης 81, 84
 πῖσος 92
 πίστεις (rhet.), varieties of
 185
 πιτυρίας 91
 πῖτυρον 91
 πῖτυς 87 f.; (κωνοφόρος) 88
 πλάσσειν 369
 πλαστική 369
 πλαταγή 638
 πλάτανος 87
 πλατύφυλλος 87
 πλατῶνι 46
 πλέθρον (πέλεθρον) 570 f.
 πλεκτάναι 632
 πλευρά 279
 πλέθος, τό 439
 πλῆκτρα 620
 πλίνθος (archit.) 306; πλιν-
 θοί, ὄπται, ὠμαί 557
 πλοῖα μακρά, στοργυλά 614
 πλουτίνδην 491
 πλῦνω 554, 556
 πνεῦμα 273, 645; πνεύματα
 νοερά 274
 πνεύμων 85
 πῶδες (naut.) 611, 620
 ποδοκάκη 507
 ποιεῖσθαι, to legitimatise a
 child 666
 ποιητοί 451
 ποῖον 272
 πόκος 554
 πολέμαρχος 454, 482
 πόλις 264, 432 f., 441,
 659
 πόλισμα 431
 πολιτεία 438; ὀρθή 264
 πολίτης 432 f.
 πολλοί, οἱ 439
 πόλις 401, 404, 626
 πόλις 91
 πολύμτος 554
 πολυπόδιον 90
 πολύπους 80, 82
 πολύπτυχον 90
 πόνος 242
 ποντικά, τά (nuts) 95
 ποντικός 44
 πόνυαι 666
 πονυαία 666
 πόρπαξ 589
 πόρφυρα 83
 πορφύριον 60
 ποῦς, in metre 787; φιλεταί-
 ρειος 570
 πράκτορες 509, 518
 πρᾶσιν αἰτεῖν 537
 πράσον 98
 πριμάδες 71
 πρίνος 87
 πρίστεις 616
 πρόβατον 587
 προβολή 483, 490
 προβουλεύειν 458
 προβούλευμα 460, 747
 πρόβουλοι 447
 προγᾶμια 633
 πρόγραμμα 457 f., 460
 πρόομος 94, 709
 προδοσία 489
 πρόεδροι 457, 462, 747
 προεσφορά 514
 προεμβόλιον 620
 προηγμένα, ἀποπροηγμένα 275
 προήρσια 630
 πρόθεσις, lying in state of the
 dead 634
 προθεσμία, ἡ 509
 προῖξ 633, 662, 666
 πρόκλησις 662; εἰς βάσανον
 503; εἰς ὄρκον 477, 504
 πρόληψις 269, 274
 προμνήστρια 633
 πρόξ 46
 πρόξενος 700, 747
 πρόπασμα, λίγδος 556
 πρόρρησις 492
 πρὸς in various dialects 727,
 733
 πρὸς τοῦλαιον 560
 προσβολή 624
 προσκαλεῖσθαι, καλεῖσθαι 499
 προσκήνιον οἱ λογεῖον 425
 πρόσκλησις 493, 499
 προσκυνεῖν 418
 προσλαμβανόμενος in music
 385
 προστάς 710
 προστάτης 450, 493, 537;
 τοῦ θεμοῦ 439
 προστίμημα 507
 προτειχίσματα 609
 πρότοννοι 611
 προῦνεκοι 560
 προῦνη 94
 προχειροτονία 461
 πρυμνήσια 611
 πρυτανεία 493
 πρυτανεαίαι 452, 457
 πρυτανεῖον 546

- πρυτάνεις 453, 457, 489, 521
 πρῶτ' 626, 683
 πρῶτων κινουῦν ἀκίνητον 257
 πρῶτως ὅν 259
 πτελέα 87
 πτερά 74
 πτέρυς 90
 πτέρυγες (mil.) 589; (naut.) 620
 πτολίεθρον 114, 431
 πτόλις 114
 πτόον 685
 πυνεψία 403
 πυγολαμπίς 77
 πυγούσιος 570
 πυγῶν 570
 πύελοι 698
 Πύθιοι 466
 πυκνόν 388
 πύκνωσις 237
 πυξία 642
 πύξος 89
 πυρά 634
 πυραλλίς 52
 πυραύστης 75
 πύργοι 616
 πυρκαῖα 491
 πύρος 91
 πωληταί 509, 518
 πως ἔχον, πρὸς τί 272
- ραβδίω 554
 ραβδωτός 306, 554
 ραφανίς 96
 ράφανος 96
 ραψοδοί 423
 ῥήματα (verbs) 642
 ῥήσος 47
 ῥήτρα 463, 468
 ῥίζιον 102
 ῥιζώματα 239
 ῥόα 94
 ῥοδῆ 90
 ῥοδόδενδρον 89
 ῥόδον 90, 587
 ῥόμβος 638
 ῥοῦς 102
 ῥωπογράφος 352
- σαγήνη 74
 σαθέριον 44
 σάκκος 676
 σαλαμάνδρα 69
 σάλπιγξ 83, 391
 Σάμαινα 614
 σάμψουχον 98
 σανδάλιον 678
 σανίς 369, 499
 σαπρά 73
 σάφειρος 381
- σάργος 71
 Σαρδιαναί βάλανοι 95
 σαρδίνος 71
 σάρδιον 381
 σαρδόνιον 74
 σαρδῶν 74
 σάρισσα 590
 σατύριον 44
 σάτυροι 156
 σαῦρος 67
 σείρην 75
 σεισάχθεια 444
 σελευκίς 52
 σελίδες 651
 σέλινον 96
 Σέλλοι 400
 σέμελος 83
 σεμίδαλις 91
 σεπτήριον 403
 σέρις 96
 σέσιλος 83
 σημείον (naut.) 620
 σημῦδα 87
 σηπία 82
 σηπίδιον 82
 σηπιαί 632
 σής 76
 σησαμή (σήσαμον) 91; wed-
 ding cake 633
 σητάνιος 91
 σίγλος οἱ σ. Μηδικός 580
 σίδη 90; (σίβδη) 94
 σιδήρου κόλλησις 556
 σίδιον 102
 σίκκος 96
 σίκκος ἄγριος 100
 σιλίγυις 91
 σίλλοι 192
 σίλλυβος 655
 σίλουρος 73
 σίμωμα 620
 σινηπί 98
 σισύμβριον 90
 σισύρα 669
 σιτηρά 91
 σίτος 685; alimony 662
 σιτοφύλακες 455, 561
 σιττακος 53
 σίττη 52
 σίλφιον 100
 σκαλμοί 611, 620
 σκάμμα (τὰ ἔσκαμμένα) 422
 σκάνδιξ 96
 σκάρος 71
 σκεῖη, τὰ 516
 σκηνή of a theatre 425; a
 booth 560
 σκηνογραφία 158
 σκιάδεα 560
 σκίλλα 100
- σκίουρος 44
 σκόλια, banquet songs 151;
 riddles 694
 σκολοπένδριον 90
 σκόλυμος 96
 σκόμβρος 71
 σκορδολάσaron 100
 σκορδύλαι 71
 σκόροδον 98
 σκάρπιος 80
 σκορπιῶδες (ἐν βιβλίοις) 80
 Σκύθαι οἱ τοξόται 539
 σκύλιον 71
 σκυλοπόταμον 47
 σκυτάλη 562
 σκυρία 556
 σκώψ 51
 σμάραγδος 381
 σμίλη 654
 σμίνθος 44
 σοφία 262
 σοφοί 237
 σπαθῶν 554
 σπάθη 554
 σπάλακος 43
 σπανίτης 50
 σπάργανα 632
 σπάρτα 103
 Σπαρτιαῖται 464 f.
 σπάρτος 103
 σπάταγος 85
 σπείρα 306
 σπείρον 611
 σπέρματα 239
 σπερμολόγος 52
 σπίζα 52
 σπιζίτης 52
 σπιθαμή 570
 σπόγγος 85, 654
 σπολάς 589
 σπονδή ἀγαθοῦ δαίμονος 694
 σπονδοφόροι 422
 στάδιον 571 f., 641
 σταθμοί 571
 σταμίνας 611
 στατήρ 478, 575, 578, 744;
 Δαρεικός, Κροίσειος, Πτολε-
 μαϊκός, Φιλίππειος 580
 σταφυλίνος 96
 στεῖρη 611
 στεμφυλίτης 691
 στερέμνια 270
 στέρσις 273
 στεφάνη 401, 676
 στεφανίται 422
 στέφανος 422
 στεφανώματα 90
 στήλη 635
 στήμων 554
 στίχοι πολιτικοί 194

- σπλεγγίς 641, 698
 στοά 560
 στοιχάς 89
 στοιχεῖα 279 f.; τῆς φωνῆς 642
 στοιχηδόν style of writing 741
 στοῖχος (naut.) 622
 στράβηλος 55
 στρατηγός 456, 746; ἐπὶ τὰ ὄπλα 449, 456; δέκατος αὐτός 456; γνώμη στρατηγῶν 456
 στρόμβος 83
 στρομβώδεις 83
 στρούτιον 94
 στρουθοκάμηλος 64
 στρουθός 52; στ. οἱ στ. ὁ μέγας 64
 στρόφιον 672
 στρίχνον μαυικόν 101
 στυλοβάτης 306
 στυλος 306
 στυμμα 105
 στυράξ 87
 συγγράμματα 136
 συγγραφαί 502, 562, 564
 συγγραφεῖς 447, 462
 σύγκλητοι 460
 συκάμνον 94
 συκῆ (σῦκον) 94
 συκόμορον 94
 συκοφάντης 448, 506
 συλλογεῖς τοῦ δήμου 460
 σύμβολον 483, 487, 562
 σύμβουλοι 472
 συμμορία 514
 συμπόσιον 683, 693
 σύμππτεις 799
 σύμππτωμα 270
 συναγρίς 71
 συνάφεια 790
 συνδέσμοι 642
 σύνδικοι 462
 συνέδριον, κοινόν 435
 συνεργοί 566
 συνηγορεῖν 506
 συνήγοροι 453
 συνθήκαι 502
 συνοικία 682, 711
 συνοικισμός 432, 441, 443, 684
 σύνολον 257, 272
 συνατάξεις 519 f.
 συντελείαι 516
 συντελεῖς 516
 συντρήραρχοι 516
 σύριγξ 391
 σῦς 46
 συσσίτια 471, 695
 σφαῖρα 638, 665
 σφαιριστήριον 696 f.
 σφαῖρος 239
 σφαίρων 74
 σφένδαμνος 87
 σφενδώνη 592, 676
 σφηκίσκος 487
 σφήξ 75
 σφόνδυλοι 306
 σφραγίς 154
 σφουρήλατον 375, 556
 σχεδίη 612
 σχινοκέφαλος 100
 σχῖνος 89, 100
 σχινοπολοκακή 103
 σωκάριον δεκαβργιον 572
 σωλήν 84; (architect.) 306
 σωφρονισταί 451, 648
 σωφροσύνη 664
 τὰ πρὸς τὰς πόλεις σύμβολα 483
 ταγός 434
 τακταί 519
 τάλαντον 575 ff., 744
 τάλαρος 554
 ταμῖαι 452 f., 458, 518; τῆς βουλῆς, τοῦ δημοῦ, τῶν στρατιωτικῶν 518; τῆς θεοῦ, τῶν ἄλλων θεῶν 521; ταμῖα, stewardess 684
 τάξεις 600, 602
 ταξίαρχοι 452, 456
 τάξις 185
 τάρανδος 46
 τάριχος 690
 ταῦρος 46
 ταφροποιοί 452
 ταῶς 58
 τειχοποιοί 452
 τελαμων 589
 τελεστά 434
 τελεστήριον 428
 τέλη τὰ ξενικά 565
 τελώναι 486, 508, 521
 τέμενος 417
 τευθηρῶν 75
 τερέβινθος, τέρμινθος 87
 τερηδῶν 75
 τεσσαρακοντήρης 622
 τέταρος 58
 τεταρτημόριον 573, 744
 τετράδιον 652
 τετραλογία 156
 τετρήρεις 621
 τετταράκοντα, οἱ 484
 τεττιγόνιον 78
 τέττιξ 78, 676
 τεῦθις 82
 τεῦθος 82
 τεῦτλον 96
 τεῦχος 655
 τεχνικόν (divination) 426
 τήθνον 85
 Τηλεγονία 144
 τῆλις 92
 τί 272
 τίγρις 47
 τίλωνες 73
 τιμᾶσθαι, ἀντιτιμᾶσθαι 507
 τίμημα 444, 495, 507
 τιμήματα (ζευγίται, θήτες, λιπῆς, πεντακοσιμεδίμοιο) 444
 τίμησις 495
 τίται 480
 τίτηθ 632
 τίφη 91
 τὸ παρ' ἡμᾶς ἀδέσποτον 270
 τὸ πλήθος τῶν Ἀθηναίων 439, 460
 τὸ τί 242; τὸ τί ἦν εἶνα 185, 256
 τόδε τι 257
 τοῖχοι (naut.) 611
 τοιχωρῦχοι 496, 712
 τοκογλύφοι 562
 τόκοι ἐφέκτοι 562; ἐπίτριτοι, ἐπτόγδοιο 564
 τολύπη 554
 τομῆ 789
 τὸν ἀφ' ἱερᾶς κινεῖν 697
 τόνου 786
 τόνος (philos.) 273; in music, varieties of 387, 645
 τόξον 592
 τοξόται 539, 580
 τοπέα 620
 τορευτική 377, 556
 τράγος 46, 85, 91; a satyr 155
 τραγωδία 155, 157; παίζουσα 156, 159
 τραπέζαι, δεύτεραι 694
 τραυμα ἐκ προνοίας 491
 τραχηλίζειν 641
 τριαγμός 422
 τρίανα 71, 74
 τριακάς 628
 τριακοντήρης 622
 τρίβων 672
 τρίγλη 71
 τρίγλυφοι 306
 τρίγωνον (mus.) 391; τρίγωνος (math.) 279
 τρημολοῖαι 622
 τρηραρχία 494
 τρήρεις 617 f.
 τριλογία 156
 τριμηνος 91
 τριούδιτις 404

- Τριόπιον 547
 τρίποδες 752
 τρίς ἀνακαλεῖν, βῶαν 634
 τρίτα 634
 τρίτη, ἡ, διεξευγμένων, συνημ-
 μένων 150, 385
 τριτογένεια 396
 τριττός 444, 446
 τριχομανές 90
 τριώβολον 487
 τρόπις 611
 τροποι 276, 611
 τροπωτήρες, κωπητήρες 620
 τροφός 632, 638
 τροχίλαια 281
 τροχίλος (ornith.) 52, 60; τρώ-
 χιλοι (archit.) 306
 τροχός 638; κεραμικός 557
 τρυγών 57, 72
 τρύπανον 89, 608
 τρωγλοδύτης 52
 τρωξάλλις 79
 τύμβος 635
 τύπτω 556
 τύπωσις 274
 τύραννος (ornith.) 52
 τυφλοπόντικος 44

 ύάκνωθος 90; (γραπτά) 90;
 (άγρία) 90; (σπαρτή) 90
 ύαλοειδές 381
 ύβρις 157
 ύδνον 97
 ύδραυλις 391
 ύδρα 487
 ύδρος, ύδρα 68
 ύδωρ, έπιλαβεῖν τό 506
 ύλη (philos.) 185, 256; άπειος
 273
 ύλλεις 465
 ύμναιος 128
 ύπασπισταί 600 f.
 ύπάτη, ή, μέσων, ύπάτων 385
 ύπέραι 611, 620
 ύπερβολαίων, ή τρίτη, παρα-
 νήτη, νήτη (mus.) 385
 ύπερήμερος 509, 562
 ύπερον 76
 ύπρος, πρώτος 626
 ύπόβλημα 620
 ύπόδημα 678
 ύποζώματα 620
 ύποθήκη 148, 562
 ύποκείμενον 272
 ύπόκρισις 185
 ύποκριτής 155
 ύπολαῖς 52
 ύπομεινες 465, 527
 ύπομνήματα 136, 201
 ύπόνοια 164

 ύπόρρημα 151
 ύποσκελίξεν 641
 ύποτραχήλιον 306
 ύπωμοσία 461, 505
 ύς 46
 ύς άγριος 46
 ύσγωνος 102
 ύσσωνος 98
 ύστριξ 44
 ύφαίνω 554
 ύφασμα 554
 ύφέαρ 89

 φάγρος 71
 φαινύδα 697
 φακή 92
 φακός 92; ό έπί τελμάτων 90
 φαλάγγια 80
 φαλαρίς 60
 φάλλαμα 49
 φαντασία, καταληπτική 274;
 (painting) 352
 φάρα 611
 φάρμακα 100, 491
 φαρμακοί 403
 φαρμακοπώλοι 722
 φάρος 673
 φασίανος 58
 φασίολος 92
 φάσις 482, 493, 497; όρφα-
 νικού οίκου 497
 φασκάς 61
 φάψ=φάσσα 57
 φελλός 87
 φερνή 633, 661 f.
 φηγός 87
 φθαρτικά 101
 φθείρ 79
 φθινόπωρον οί μετόπωρον 627
 φιδίτια 471
 φιλόσοφος 237
 φιλύκη 89
 φιλύρα 87
 φιλυρέα 89
 φλόγινον 90
 φλόξ 90
 φονικιοῦν 487
 φονικόπτερος 60
 φονικός βάλανος 95
 φονίκουρος 52
 φοῖνιξ 95; (θηβαιός) 95;
 (χαμαιριφής) 95
 φόνος (sacrifice) 400
 φόνος έκούσιος οί έκ προνοίας
 491
 φορεία 701
 φόρμιγξ 152, 391
 φόρος 519 f.; βασιλικός 464
 φορτίον 576
 φραγμίτης 104

 φρατρία 108, 432, 442, 446,
 451 f., 405, 523, 666;
 φρατρίαρχος 452
 φρόνησις 242, 262
 φρουράν φαίνεν 469
 φρούγετρον 91
 φρυγίλος 52
 φρούνη 69
 φύκος 90, 102; (φοῦνιξ) 90;
 (θαλάσσιον τό πλατύ) 90
 φυλαί 430, 432, 441, 446, 452
 φυλακαί 626
 φύλαρχοι 452, 456
 φύλλον Ινδικόν 105
 φυλοβασιλείς 441, 452, 491
 φύσργξ 98
 φύσις 273; φύσιν, κατά, παρα
 275
 φύκαινα 49
 φύκη 48, 587

 χαίρε, salutation on a funeral
 monument 635
 χάλινα 74
 χαλινός 620
 χαλκεία 410
 χαλκή μυία 638
 χαλκίς 51
 χαλκός 556
 χαλκοῦς 744
 χάλυψ 556
 χαμαιάκτη 89
 χαμαιλέων 67
 χαμίτις 94
 χάννα 71
 χαραδριός 60
 χαρακίας 104
 χαρακτήρ, Ισχνός, μεγαλοπρε-
 πής 174
 χάρις 174
 χεδροπά 92
 χείμαρος 613
 χειμόσπορος 91
 χειμών 627
 χείρες σιδηραί 624
 χειροτονια 453, 489
 χελιδών 52, 71
 χελών 71
 χελώνη 66; ή θαλαττία 66
 χερνήτης 554
 χέρνιβα νέμειω 418
 χήμη 84; (βασιλική) 84
 χήν 61
 χηναλώπηξ 61
 χηνίσκος 615
 χίδρα 91
 χίλιαι, αι 493
 χίμαιρα 46
 χιτών 669, 673 ff.; έτερο-
 μάσχαλος 671

- | | | |
|---|---|--|
| <p> <i>χλαίνα</i> 669
 <i>χλαμύς</i> 554, 673, 677
 <i>χλωρίς</i> 52
 <i>χλωρίων</i> 52
 <i>χόανος</i> 556
 <i>χούνηξ</i> 573
 <i>χοίριναί</i> 83, 507
 <i>χοίρος</i> 46
 <i>χόνδρος</i> 91
 <i>χορηγία</i> 161, 164, 494, 515
 <i>χορηγοί</i> 452, 454
 <i>χορός, τραγικός</i> 155
 <i>χούς</i> 573
 <i>χρήσις</i> 562
 <i>χρηστογραφία</i> 350
 <i>χρόνος</i> 645
 <i>χρυσομήτρις</i> 52 </p> | <p> <i>χρύσοφρος</i> 74
 <i>χρῶμα ἡμιόλιον, μαλακόν, σύν-
 τονον</i> <i>οἱ τονιαῖον</i> 388
 <i>χώρα συντέλη</i> 435
 <i>χωρίζοντες, οἱ</i> 139
 <i>χωρίς οἰκούντες</i> 540

 <i>ψάγδας</i> 88
 <i>ψάρ</i> <i>οἱ ψάρος</i> 52
 <i>ψήν</i> 79, 94
 <i>ψήττα</i> 71
 <i>ψηφίσματα</i> 264, 462, 487,
 495, 747
 <i>ψήφος, ἡ πλήρης, ἡ τετραπη-
 μένη</i> 507; <i>ἀπὸ ψήφων λογι-
 σασθαι</i> 643
 <i>ψίλων</i> 73 </p> | <p> <i>ψίττακος</i> <i>οἱ ψιττάκη</i> 53
 <i>ψύλλα</i> 79, 80
 <i>ψυχή, butterfly</i> 76; (psych.)
 258; (physics) 273

 <i>ἄβαλ</i> 465
 <i>ἄκιμον</i> 98
 <i>ἄστέκα</i> 65
 <i>ἄραι, ἰσημεριναί</i> 626, 683
 <i>ἄρογραφαί</i> 107
 <i>ἄροι</i> 107, 165
 <i>ἄτις</i> 58
 <i>ἄτὸς</i> 51

 <i>φέτας</i> 434
 <i>φοικεύς</i> 477 </p> |
|---|---|--|

